

RESILIENCE, ACHIEVEMENT MOTIVATION, AND RELATIONAL SKILLS AS
PREDICTORS OF PERCEIVED ACADEMIC PERFORMANCE AND COLLEGE
ADJUSTMENT IN UNDERGRADUATE UNIVERSITY STUDENTS

A Dissertation

by

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BS, Texas A&M University-Corpus Christi 2006
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Submitted in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

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This dissertation meets the standards for scope and quality of
Texas A&M University-Corpus Christi and is hereby approved.

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ABSTRACT

Predictors of upperclassmen undergraduate students' perceived academic performance and adjustment to college were examined using four instruments. The research sample was comprised of 308 students from South Texas and findings indicate that correlations between predictor variables and the criterion variable student perceived academic performance produced statistically significant positive correlations, *except* between achievement motivation and performance rating. The largest positive correlations among predictor variables and the criterion variable college student adjustment were between relational skills and achievement motivation and between relational skills and college student adjustment. Of the three predictors, at 5.7%, resilience uniquely accounted for the most variance in college student adjustment. Resilience significantly predicted performance rating, and uniquely accounted for 5% of the variance in the model. The researchers provided implications for educators, college counselors, and college administrators, as well as provided directions for future research.

DEDICATION

"Commit yourself to lifelong learning. The most valuable asset you'll ever have is your mind and what you put into it." ~ Brian Tracy

To my 'first babies', Ru & Mando:

I hope that you never stop learning, that you remain ever curious, and that you always have complete confidence in your abilities. Please remember that you are smart, capable, and you can achieve anything you set your heart on, as long as you work hard, refuse to give up, and find reassurance in knowing that you have the opportunity to learn from any mistake made. As you boys grow into accomplished young men, keep in mind that *you alone are responsible for your happiness and your success*. It is no secret that you boys will quickly pass me up in height... just know that you will forever be my 'babies' and I love you both more than you will ever understand.

~Auntie Mimi

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CHAPTER I: INTRODUCTION

The pursuit of an undergraduate education serves as a transition from adolescence to adulthood and entry into the workforce. According to the National Center for Educational Statistics, undergraduate enrollment is projected to increase by three percent (from 16.9 million to 17.4 million students) between 2016 and 2027. This projected increase mirrors the overall increase of 28% experienced from 2000 to fall 2016 (NCES, 2018). A concern is the issue of retention among college students who are planning to spend at least four years in college and complete a bachelor's degree. Retention over this period is significant to students, parents, instructors, and university administrators. Knowing that student enrollment will increase year to year is one thing. However, it is essential to know whether the same students are returning year to year, and ultimately whether these students will remain enrolled long enough to complete their degree. Therefore, undergraduate student attrition continues to be a significant issue in higher education (Azarcon, Gallardo, Anarcin, & Velasco, 2014). It is important that researchers investigate factors related to the success and adjustment of college students as they matriculate through a four-year degree program (Pugachov, Maxwell, Youmans, & Wahnschaff, 2015).

While academic success may come easily for some students, many continue to struggle with the rigorous task of adjusting to life as a college student, constantly juggling assignments, meeting expectations, and experiencing a changing lifestyle. Monroe (2009) revealed that academic demands increase and new social relations are established throughout one's college experience. During this time, students are often uncertain of their abilities to meet the constant demands facing them in college (Robinson, 2009). If college students do not feel adequate to cope with the environment while on a college campus, they could easily become susceptible to depression and anxiety (CCMH Annual Report, 2018). High rates of psychological morbidity have been recorded already during one's first year of college and often continuing throughout one's

university experience (McDermott & Pettijohn, 2011). Although undergraduate attrition is emphasized among first-year students, second-year and third-year students, and even seniors drop out of college. College students report feeling overwhelmed by constant academic and social demands; 87% said they felt overwhelmed by all they had to do at least once in the previous year, according to the American College Health Association (2017). College students throughout their academic career are considered at-risk for academic difficulties (Wintre, Bowers, Gordner, & Lange, 2006), and ultimately dropping out of school (Credé & Neihorster, 2012; Haktanir et al., 2018). For first-time, full-time degree-seeking students who enrolled at four-year degree-granting institutions in the fall of 2015, the retention rate (i.e., the percentage of students returning the following fall) was 81%. Retention rates were higher at more selective institutions (i.e., those with higher admissions standards and lower acceptance rates), regardless of institutional control (public, private nonprofit, or private for-profit) (NCES 2018). The six-year graduation rate (150 percent graduation rate) for first-time, full-time undergraduate students who began seeking a bachelor's degree at a four-year degree-granting public institution in fall 2010 was 60% (NCES 2018). Although statistics are not available, a number of these students were upperclassmen in either their junior or senior year of college.

University attrition rates have increased from 12.5% in 2009, before the demand-driven system was phased in, to 14.8% in 2014 (Moodie, 2015). The United States has relatively high college dropout rates. There are several factors related to the attrition rates of college students. These factors may include Personal and family, Academic Performance, Institution, and, of course, Engagement with study (Cherastidtham, Norton, & Mackey, 2018). The research studies of student attrition have employed traditional academic factors such as high-school grade point average (Atkinson & Geiser, 2009; Cherastidtham, Norton, & Mackey, 2018; Tinto, 1993), first-quarter grade point average (DeWitz, Woolsey, & Walsh, 2009), and admissions test scores (Kobrin,

Patterson, Shaw, Mattern, & Barbuti, 2008; Rothstein, 2004) as strong predictors of academic performance as measured by students' college grade point average. Other studies have focused on non-academic determinants of success. One study found confidence to be a significant non-cognitive predictor of academic achievement (Stankov, 2014).

According to American College Testing (2007), nonacademic factors such as motivation, academic self-discipline, and self-regulation influence academic achievement and whether students continue their college career. Additional studies established pre-college variables of high-school GPA and scores on college admissions tests as strong predictors of academic performance (ACT 2007; Atkinson & Geiser, 2009; Kobrin et al., 2008; Richardson, Abraham, & Bond, 2012). In earlier studies on attrition, Braxton, Duster, & Pascarella (1988) suggested that minority students were more likely than their counterparts to depart from college. Several studies have associated family income with student attrition behavior (Braxton, Brier, & Hossler, 1988; Hossler & Vesper, 1993; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1978, 1980; Stage & Hossler, 1989). Parents' educational attainment has also been shown to affect college student attrition (Pascarella & Chapman, 1983; Pascarella & Terenzini, 1978, 1980, 1983; Stage, 1988). Particularly, lower persistence rates among first-generation students were highlighted in studies focusing on attrition (Horn, 1998; Ishitani, 2003b; Nunez & Cuccaro-Alamin, 1998; Riehl, 1994). Using institutional data, Ishitani (2003b) discovered a higher risk of departure among first-generation students in their first year of college. One of the primary publications that annually ranks American colleges and universities, the *U.S. News and World Report*, has added first-to-second year retention and graduation rates to their system of evaluating baccalaureate-level institutions, neglecting the attrition rates of sophomores, juniors, and seniors in college (Jassal, 2008).

Specific knowledge about student retention, adjustment, and achievement can perhaps assist institutions with developing more strategic support services that better assist their students in

achieving academic success. Much of the research within the subject of student attrition is focused solely on first-year student attrition, rather than that of upperclassmen undergraduates (Beer & Lawson, 2018; Griswold, 2014). The emphasis on this timeframe is generally due to disproportionately high attrition rates for first-generation students from their first to second year. However, given the substantial impact of timely degree attainment on the students, their families, institutions, and society, it is necessary to go beyond retention rates of freshmen and acknowledge that attrition of students, particularly at the junior and senior levels, is equally significant and deserves unique attention so that overall retention rates might be improved. Mabel and Britton (2018) estimate that 14% of all entrants to college and one-third of all dropouts completed at least three-quarters of the credits that are typically required to graduate before leaving without a degree. Their results also indicate that the probability of departure spikes as students near the finish line. Sosu and Pheunpha (2019) findings show that while the beginning of the second year was a critical period of dropout with almost 20% of students leaving by this time, as much as 10% of students drop out between the second and final year. Students with the lowest entry grades were about 2.17 times more likely to drop out while those who were farther away from family support were 1.32 times more likely to drop out across each semester. The cumulative effect of low entry grades and living away from family support resulted in a 30% probability of dropping out in the second year. The dropout rate among this category of students by the final year was 60% compared to only 14% for students with high entry grades and who live close to their families (Sosu & Pheunpha, 2019).

Many college students believe that acceptance by an institution implies they are college ready, possessing the skills and traits needed to successfully transition into college, complete all four years, and graduate during that period (Kwon, Yoo & Bingham, 2016; Tate et al., 2015). Also, for some students and their parents, it may be presumed that the marker of college success is

graduating in four years (Koshy, Dockery & Seymour, 2019; Lorenzo-Moledo, Godas-Otero & Santos-Rego, 2017).

Resilience has been studied as a factor related to success, including accomplishments in college and beyond (Campa, 2010; Calhoun, Snodgrass Rangel & Coulson, 2019; Mbindyo, 2011; McDougal, Cox, Dorley & Wodaje, 2018). Resilience is often thought of as an individual's capacity to overcome adversity and successfully adapt to their environment (Pidgion et al. 2014; Wang, 2009). A review of the literature reveals strong evidence connecting resilience and academic success. A longitudinal study by Scales et al. (2003) found that higher levels of resiliency traits strongly correlate with higher grade point averages (GPAs) among middle and high-school students. The same might be true throughout one's college experience.

However, salient factors including students' motivation (achievement motivation) and one's ability to interact with others in a new environment (relational skills) have not been investigated as factors predicting success in college, particularly among juniors and seniors. Yet, achievement motivation has been studied extensively in business, (Alschuler, 1971, 1973; Atkinson, 1957, 1964; Atkinson & Feather, 1966; Dweck, 2000; Eccles & Wigfield, 1995; McClelland, 1958, 1961, 1965; McClelland, Atkinson, Clark & Lowell, 1953; Murray, 1938; Wigfield, & Schiefele, 1998) and educational settings, elementary through secondary levels (Kolb, 1965; McClelland & Winter, 1969; Singh, 2011; Smith, 2011, 2015; Smith & Troth 1975; Steinmayr & Spinath, 2009; Vroom, 1964; Weiner, 2012). Achievement motivation, defined as "the striving to increase or to keep as high as possible, one's own capabilities in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either succeed or fail, is certainly a salient factor in the college setting" (Heckhausen, 1967, pp.4-5). Schuler and Prochaska (2001) define achievement motivation as a general behavioral orientation. High levels of achievement motivation have been associated with success

and performance in human societies (McClelland, 1961). Despite the role of motivation to achieve, studies have not adequately focused on this factor as related to performance and adjustment to college (Rosenzweig & Wigfield, 2016; Schunk, Pintrick, & Meece, 2008).

In addition to achievement motivation, relational skills are considered important for success in our society (Bradbury & Lichtenstein, 2000; McFadden, 2014; Uhl-Bien et al., 2000; Uhl-Bien, 2006; Valdez, 2015). Relational skills are defined as the way individuals interact with others and in groups (Uhl-Bien, 2006). Relational skills require students to interact with peers, which has been shown to have a positive relationship with student gains and satisfaction with college (Kezar & Moriarty, 2000). The interactions between students and faculty is another important component of relational skills as applied to an academic setting. McFadden (2014) found that student-faculty interactions are positively associated with a wide range of student outcomes, such as students' self-assessed leadership abilities and social self-confidence. Faculty members play an essential role in influencing student learning both in and out of the classroom, in part because of relational skills (McMurtrie, 2011). Uhl-Bien, Graen, & Scandura (2000) describe the relationship development process as beginning with two individuals who engage in an interaction or exchange sequence (a series of interactions). The nature of these interactions depends on several things. First, it depends on the characteristics individuals bring to the relationship, including their personal, physical, and psychological makeup that remains relatively stable and disposes them to approach interpersonal situations in a certain way (Phillips & Bedeian, 1994). Second, it depends on the individuals' expectations of the exchange, which are developed based on past experiences, outside information about the other, and implicit leadership theories or "schemas" (Lord & Maher, 1991). Third, it depends on their assessment of and reaction to the exchange both while it is occurring and in retrospect (Blau, 1964; Homans, 1961; Jacobs, 1971; Uhl-Bien et al., 2000; Umphrey & Sherblom, 2014).

Spencer-Rodgers (2001) argued that students' sense of purpose would be enhanced as the frequency of student-faculty interactions increased, regardless of whether the interaction was formal or informal. The literature above all supports the important role of faculty members in enhancing students' adjustment and supporting their success. Several scholars (Andrade, 2006, Anaya & Cole, 2001; Spencer-Rodgers, 2001; Valdez, 2015; Uhl-Bien, 2006) examined the beneficial effects of relational skills among students with diverse backgrounds. Valdez (2015) investigated the relationship between students and faculty and student adjustment to college. They found that compared to students' background characteristics, students' relationships with faculty members act as strong predictors of college adjustment. Another study, Andrade (2006) found that student-faculty relationships were strong predictors of student adjustment to college among students of color. Also, Anaya and Cole (2001) examined the impact of relational skills on college student academic achievement among international students; they found that relational skills, both academic and personal interactions, and perceived quality of student-faculty interaction were positively associated with international student's college grades. Yuan (2011) also claimed that relational skills had a positive association with the self-rated public speaking ability of male international students and perception of capacity to influence others for female international students. This study addresses the gap in the literature that examines the impact relational skills on performance and college student adjustment of upper-level college students.

Statement of the Problem

According to the Center for the Study of College Student Retention (2008), nearly 50% of students entering higher education will not earn a degree. These students drop out of college in either their first, second, or third year of college and some even in their senior year. University attrition rates have increased from 12.5% in 2009 to 14.8% in 2014 (Edwards & McMillan, 2015). Additionally, research shows that students who do not adjust well to college, particularly in the

dimensions of resilience and relational skills, are more likely to leave school before graduation (Glass, Wongtrirat, & Buus, 2015; Kenzie, 2013). This is a significant problem for both students and higher education institutions. Students who drop out of college are often left to deal with the social stigma of failing and missing the college experiences of their peers (Kenzie, 2013).

Additionally, students who drop out of college are likely to have decreased job opportunities and by 2020, an estimated two-thirds of job openings will require postsecondary education or training (Carnevale, 2013). A report to the U.S. Congress and the Secretary of Education, *Pathways to Success* (2012), stated that the nation's global competitiveness is threatened by stagnant or declining college completion rates. It was further stated that income inequality, one of several high -risk factors, is affecting college completion rates, particularly among young Americans and nontraditional students.

Academic institutions also face financial consequences when students drop out of college, whether as freshmen or seniors. To address these financial difficulties, the cost-effectiveness of focusing on retention was summarized decades ago by Astin (1975), who stated that “in four-year institutions, any change that deters students from dropping out can affect three classes of students at once, whereas any change in recruiting practices can affect only one class in a given year. From this viewpoint, investing resources in preventing students from dropping out of college may be more cost-effective than applying the same resources to more vigorous recruitment efforts” (p. 2). In other words, a student who remains with an institution for four years will generate the same tuition income as four students who leave after one year. If we understand more about the factors associated with college success, we may be able to revise attrition trends in a way that best supports student achievement. Resilience, achievement motivation, and relational skills are factors that have not been examined together as predictors of academic performance and adjustment to college among junior and senior college students.

Purpose of the Study

The purpose of this study was to investigate the relationship of three constructs—resilience, achievement motivation, and relational skills—to the perceived academic performance and adjustment to the college of junior and senior college students. This study adds to the existing research on academic performance of college students by examining factors of resilience, achievement motivation, and relational skills, and how these constructs relate to perceived academic performance and college adjustment of juniors and seniors. Also, by understanding the salience of these factors, educators, perhaps, can develop strategies to assist students in their adjustment as well as performance in the college experience.

Theoretical Perspective

Rutter (1990), one of the earliest researchers of resilience, argued that resilience is a process, not a trait. He stated it is not enough to identify protective factors because these do not create resilience in all cases. Resilience is created when these factors initiate specific processes in the individual. Rutter identified three such processes: building a positive self-image, reducing the effect of the risk factors, and breaking a negative cycle to open up new opportunities for individuals. He also argued that because resilience is a process which changes over time, researchers should use qualifiers such as “relative” and “variable” to describe the process (as in his definition above), rather than any term that might imply absoluteness (Rutter, 1990). According to Masten (2006), the premise of resilience theory is based on the observations that some individuals flourish and achieve positive outcomes despite the adversities they face. Masten indicated that the resiliency aspect is based on internal assets of strengths, temperament, and social skills.

Studies of achievement motivation (McClelland, 1961; Wigfield & Eccles, 1992, 2000) and resilience (Richardson, 2002) offer a framework for this study of strength-based non-cognitive factors related to the academic performance of college students. The conceptual framework of this

study included the following theories: metatheory of resilience and resiliency (Richardson, 2002), achievement motivation theory (McClelland, 1961), and relational theory (Uhl-Bien, 2006). The metatheory of resilience and resiliency illustrates findings from three waves of resiliency inquiry: resilient characteristics of individuals are identified, the process of acquiring those resilient qualities is recognized, and the motivational force driving individuals toward self-actualization is discovered (Richardson, 2002).

Research on achievement motivation has a long and distinguished history (Alschuler, 1971, 1973; Atkinson, 1957, 1964; Atkinson & Feather, 1966; Dweck, 2000; Eccles, Wigfield, & Schiefele, 1998; Kolb, 1965; McClelland, 1958, 1961, 1965; McClelland, Atkinson, Clark, & Lowell, 1953; McClelland & Winter, 1969; Murray, 1938; Singh, 2011; Smith, 2011, 2015; Smith & Troth 1975; Steinmayr & Spinath, 2009; Vroom, 1964; Weiner, 2012). Achievement motivation can be defined as “the striving to increase, or to keep as high as possible, one’s capabilities in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either succeed or fail” (Heckhausen, 1967, pp.4-5). Schuler and Prochaska (2001) define achievement motivation as a general behavioral orientation. High achievement motivation is often associated with success and performance in human societies (McClelland, 1961). To produce adequate conditions for the development of achievement motivation, it is necessary to understand how achievement motivation is developed, and how it can be translated into successful action (McClelland, 1958). McClelland and Atkinson’s achievement motivation theory is based on personality characteristics that are manifested as a dispositional need to improve and perform well, according to a certain standard of excellence (Alschuler, 1971; Atkinson, 1957; McClelland, 1958; McClelland, Atkinson, Clark, & Lowell, 1953). For over three decades, McClelland and his associates researched high-achieving individuals. Findings by McClelland and others led to a theory of achievement motivation identifying cognitions and behavior patterns

common among high achievers (Smith, Karaman, Balkin, & Arora, 2019). Findings targeted a prototype of the high-achieving individual as one who utilizes a set of thoughts and behavior strategies when embarking upon a task or assignment. Research findings (Alschuler, 1971; Atkinson, 1957; McClelland, 1958; McClelland, Atkinson, Clark, & Lowell, 1953) supported a set of thoughts associated with high achievers. The ten thoughts of high achievers, updated to current society as developed by Smith are Achievement Imagery, Need, Action, Hope of Success, Fear of Failure, Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help (Smith, 2015).

Relational Skills refer to the attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). Relational Leadership Theory (RLT) emphasizes an entity perspective that focuses on identifying attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). The term relational is used to describe a view of leadership and organization as human social constructions that emanate from the rich connections and interdependencies of organizations and their members (Bradbury & Lichtenstein, 2000; Uhl-Bien, 2006). Relational attributes have been studied as they relate to leadership, the hierarchical structure within organizations, and business and government. However, there is not sufficient existing research involving relational attributes or skills and student success or retention.

The Relational Skills Inventory (RSI) is designed to measure the interactive relationship skills of individuals (R. L. Smith, personal communication, May 1, 2019). Relational skills play a role in business, education, government agencies, and almost every setting where individuals interact. The Relational Skills Inventory was developed based on Relational Leadership Theory (RLT) by Uhl-Bien (2006), Humanistic Theory by Rogers (1959), Trust Theory by Castelfranchi and Falcone (2010), and Social Cognitive Theory by Bandura (2001). The RSI involves four factors: the relational attributes, the core communication skills, trust, and the safe environment (R.

L. Smith, personal communication, May 1, 2019). Core Communication Skills Factor is based on Humanistic Theory, Relationship Centered Counseling, and Rogers' Core conditions (empathy, congruence, and unconditional positive regard). Rogers, who is the leading representative of humanistic psychology, emphasizes that the human nature is good and when the humans are left to their own devices, they have the tendency for self-actualization (Rogers, 1980). Yalom (1998) described the relationship between the therapist and the client as the therapy, and, according to Rogers (1951), the role of the therapist is a highly important part of the human equation.

The Trust Factor is rooted in The Commitment-Trust Theory (Castelfranchi & Falcone, 2010; Morgan & Hunt, 1994) and The Socio-Cognitive model of trust. The Socio-Cognitive model of trust is based on a portrait of the mental state of trust in cognitive terms (beliefs, goals). Another important characteristic of the socio-cognitive model of trust is the distinction between trust "in" someone or something that has to act and produce a given performance thanks to its *internal characteristics*, and the global trust in the global event or process and its result, which is also affected by *external factors* like opportunities and interferences (Castelfranchi & Falcone, 2005). Morgan and Hunt's Commitment-Trust Theory (1994) maintains that those networks characterized by relationship commitment and trust engender cooperation (in addition to acquiescence, a reduced tendency to leave the network, the belief that conflict will be functional, and reduced uncertainty).

Creating a Safe Environment is based on social cognitive theory. Albert Bandura developed the Social Cognitive Theory based on the concept that learning is affected by cognitive, behavioral, and environmental factors (Bandura, 1991, 2001, 2009). An extraordinary capacity for symbolization provides humans with a powerful tool for comprehending their environment and creating and regulating environmental events that touch virtually every aspect of their lives. Most external influences affect behavior through cognitive processes rather than directly. Cognitive factors partly determine which environmental events will be observed, what meaning will be

conferred on them, whether they leave any lasting effects, what emotional impact and motivating power they will have, and how the information they convey will be organized for future use (Bandura, 2001).

Research Questions

This study sought to determine the impact of factors of resilience, achievement motivation, and relational skills on academic success and adjustment to college among undergraduate junior and senior students.

The following research questions were investigated.

1. What are the levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students?
2. What is the relationship among undergraduate students' resilience, achievement motivation, and relational skills, perceived academic performance, and adjustment to college?
3. Is there a difference in college adjustment and perceived academic performance of undergraduate college students based on gender?
4. To what extent can the variance in college student adjustment be accounted for by resilience, achievement motivation, and relational skills?
5. To what extent can the variance in college students' perceived academic performance be accounted for by resilience, achievement motivation, and relational skills?

Significance of the Study

This study has significance to school counselors, college counselors, counselor educators, college administrators, and educators by adding to the limited body of knowledge on the factors of resilience, achievement motivation, and relational skills of undergraduate college students as they relate to college success. A growing number of undergraduate college students are experiencing

difficulty meeting the expectations and challenges while enrolled in college (Malin, Bragg, Hackmann, 2017; Tung, 2016). The majority of studies on success rates and attrition have focused on the adjustment and performance of college freshmen (Credé & Niehorster, 2012; Haktanir, et al., 2018; Lee, 2016). There is a plethora of data about the transition of students who leave high school and enter college (Gibbons, Rhinehart, & Hardin 2019; Peng et al., 2012). It should be noted that adjustment occurs throughout one's college experience (Pittman & Richmond, 2008; Ribbe, Cyrus, & Langan, 2016). Academic challenges often increase with the expectation that students conduct more in-depth research during their senior years of college (Beer & Lawson, 2018). After completing general studies courses, many covering similar topics that were studied in high school, college juniors and seniors face additional challenges involving adjusting to more rigorous courses. Expectations during one's last two years of college might be higher, thus challenging one's level of resilience and motivation (Beer & Lawson, 2018; Griswold, 2014). There is a gap in the literature of research focusing on the adjustment and performance of juniors and seniors in college.

Findings from this study perhaps will provide support for college instructors to implement programs related to resilience, coping, achievement, and relational skill building that could have a positive effect throughout one's entire college experience. These programs could assist in improving the performance of college students as they face challenges throughout their college career. College counselors perhaps can draw on findings from this study to assist undergraduate students as they enter college, and as they continue their studies throughout college. University administrators can utilize the results of this research to better understand factors that predict the adjustment and performance of college students in their third and fourth year of study. Results from this study could be useful in indicating information about upperclassmen students in terms of

the constructs studied (resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance).

Methodology

Population and Sample

The population for this study was junior and senior undergraduate college students at a regional public four-year university in South Texas. The sample was drawn from this population and consisted of participants who were 18 years or older. Participants were recruited from Junior/Senior level undergraduate classes in the College of Business. The sample was one of convenience with instructors willing to allow volunteer participation from their students. The sample size was based on an a priori power analysis using G*Power 3.0.10 to calculate the minimum sample size needed to evaluate the research questions of this study (Faul, Erdfelder, Buchner, & Lang, 2009). Using a minimum power of .80, considered a suitable level of power by Cohen (2013), and assuming a medium effect size as $f^2 = .15$, and a .05 alpha level, the estimated target sample size for the study was reported to be 154. This was an adequate sample size for sufficient power in a multiple regression analysis (Heppner, Wampold, & Kivlighan, 2008).

Instrumentation

This quantitative-designed study focused on factors that could be predictive of academic achievement and adjustment of juniors and seniors in college. Undergraduate college students choosing to participate completed a brief demographic questionnaire and four instruments. Demographic and situational information included the following: age, gender, ethnicity, student status, academic load, living situation, work situation, and performance rating. The performance rating was a self-rating of their overall performance in college, a self-report of their high school grade point average, and a self-report of their grade point average at midterm in college. Factors predicting adjustment and academic performance included the Brief Resilience Scale,

Achievement Motivation Measure, and the Relational Skills Inventory. The Inventory of New College Student Adjustment INCA measured college adjustment. The self-rating of participants' overall performance in college was ultimately used to measure the *perceived academic performance* criterion variable.

Brief Resilience Scale

The Brief Resilience Scale (BRS) (Smith et al., 2008) was created to assess resilience as the ability of an individual to recover from stress and is a 6-item scale consisting of three positively worded items and three negatively worded items. The items are responded to on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A total score for resilience is calculated by dividing the total score by the number of items on the scale (six). Scores can range from six to thirty, with higher scores indicating greater resilience. Smith et al. (2008) reported good internal consistency for the Brief Resilience Scale. Based on scores across four different samples, the Cronbach's alpha reliability coefficient ranged from .80 to .91 (Smith et al., 2008). The test-retest reliability was moderate with a 1-month test-retest reliability coefficient of .69 and a 3-month test-retest reliability coefficient of .62. Smith et al. (2008) assessed the convergent and discriminant validity of the Brief Resilience Scale by examining correlations between the Brief Resilience Scale and 12 other scales. Included scales were separated into five groups: (1) mental distress, containing the three factors of DASS-21 (Lovibond & Lovibond, 1995) and DASS-9 (Kyriazos et al., 2018a; Yusoff, 2013); (2) well-being, with WEMWBS (Tennant et al., 2007), MHC-SF (Keyes, 2008), the Flourishing Scale (Diener et al., 2010) and Satisfaction with Life Scale (SWLS) (Diener et al., 1985); (3) positivity scales including the Meaning in Life Questionnaire (MLQ; Steger et al., 2006) and Gratitude 6 Questionnaire (McCullough et al., 2002); (4) Affect measures containing the Scale of Positive and Negative Experiences (SPANE) (Diener et al., 2010) and SPANE-8 (Kyriazos et al., 2018b); and (5) The WHOQOL-BFEF

(WHOQOL Group, 1998a, 1988b). Further assessment of convergent validity revealed negative correlations between the Brief Resilience Scale and measures of pessimism, perceived stress, behavioral disengagement, depression, negative effect, self-blame, denial, negative interactions, alexithymia, negative interactions, and physical symptoms (Smith et al., 2008).

Achievement Motivation Measure

The Achievement Motivation Measure (AMM) (Smith, 2015, Smith et al., 2019) measures achievement thinking and achievement behavior. Achievement thoughts and behaviors, identified by Atkinson and McClelland, provide the conceptual framework of the AMM. Cognitions, measured by the AMM as related to achievement thoughts include Need, Hope of Success, and Fear of Failure. Additional achievement thoughts include Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help (McClelland et al., 1953). The first set of items on the 14-item survey measure overall achievement motivation in terms of thinking and action and is answered using a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). The 14-item AMM included nine items for the *Achievement Thoughts* subscale and five items for the *Achievement Behaviors* subscale. Higher scores reflect a high level of achievement motivation, and lower scores reflect a low level of achievement motivation. In order to evaluate the instrument, researchers (Smith et al., 2019) conducted two analyses using independent data sets. Based on the sample scores, the Cronbach's alpha reliability coefficient was calculated at .84 (Smith et al., 2019). An Exploratory Factor Analysis (EFA) using principal axis factoring was conducted on the first data set, including 303 students enrolled in graduate and undergraduate courses in a university setting. An oblique rotation method examined the relationship between the components of achievement motivation (Tabachnick & Fidell, 2013). Results of the EFA showed that the AMM retained 14 items under two factors, accounting for approximately 54% of the variance in the model. A Confirmatory Factor Analysis (CFA) was used to evaluate the model in the second analysis. The

CFA is an appropriate follow-up analytical approach to establish the factor structure of a scale (Bartholomew, Scheel, & Cole, 2015). The CFA was conducted using a new data set that included 329 participants from the study. The CFA indicated a mediocre fit (Dimitrov, 2014). Based on the modification indices, two modifications were made.

The AMM provides a quick and modern measure of achievement motivation for use in several settings. The AMM has utility as a pre-post measure, testing the outcome of programs attempting to increase levels of achievement motivation. These programs include teaching achievement thoughts and behaviors to adolescents and adults in an attempt to help them reach their goals and increase overall performance. These programs are located in schools, government agencies, and business settings.

With further study, the AMM can assist in screening personnel in education, as well as business. If motivation to achieve is an issue, the AMM can provide a new and expedient method of addressing, or at least assessing this issue. At the very least, individuals familiar with the AMM after completing the measure might begin to think like and behave like a high achieving individual, potentially increasing performance.

Relational Skills Inventory

Relational Skills refers to the attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). Relational Leadership Theory (RLT) emphasizes an entity perspective that focuses on identifying attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). The term relational is used to describe a view of leadership and organization as human social constructions that emanate from the rich connections and interdependencies of organizations and their members (Bradbury & Lichtenstein, 2000; Uhl-Bien, 2006). The Relational Skills Inventory (RSI) measures interactive relationship skills of individuals using four factors: relational attributes (general attributes of individuals as they engage in

interpersonal relationships), core communication skills (essential conditions for effective communication based upon the Law of Interpersonal Relationships; Rogers, 1959), trust (based upon inferred trust in the context of one-to-one and group relationships; Castelfranchi & Falcone, 2010; Morgan & Hunt 1994) and creating a safe environment (based on social cognitive theory of creating a safe psychosocial environment; Bandura, 2001, 2009).

The RSI is a measure of how students communicate and respond to others individually and in a group. The inventory was created based upon the theoretical concepts of relational leadership skills (Uhl-Bien, 2006). Test items were developed as the result of a comprehensive literature review. Fifty-four items were initially constructed. A content analysis was conducted (Lawshe, 1975; Wilson, 2012), narrowing the number of usable items to 32. A 5-point Likert scale was used, ranging from 1 (*never*) to 5 (*always*) (R. L. Smith, personal communication, May 1, 2019).

Inventory of New College Student Adjustment

The Inventory of New College Student Adjustment (INCA) (Watson & Lenz, 2018) was developed to assess the adjustment difficulties experienced by first-year college students. Upon development, the INCA began with 83 items. An Exploratory Factor Analysis (EFA) was conducted utilizing the principal axis factoring (PAF) extraction method on the INCA survey data obtained from a random sample of 324 students drawn from the researchers' original participant pool of 474 (Watson & Lenz, 2018). This analysis resulted in the emergence of a two-factor solution: Factor 1 was labeled *supportive network* as the items loading on this scale each described relationships with peers and family; Factor 2 was labeled *belief in self* (Watson & Lenz, 2018). Principal axis factoring approach was selected because it does not carry the assumption of multivariate normality (Pituch & Stevens, 2016) and allows factors to correlate (Costello & Osborne, 2005). A promax rotation was performed due to the researchers' expectation that

correlations would exist among factors, and oblique rotations often provide a useful starting point when conducting EFAs (Dimitrov, 2014). After pairing error terms, a good model fit was found for both INCA subscales (Watson & Lenz, 2018). Alpha coefficients of .83 and .77 for the Supportive Network and Belief in Self subscales, respectively, exceeded standard conventions. The PAF procedure was used to extract factors from the data. Using the retention criteria described earlier, data supported a two-factor structure explaining 47.17% of the variance for the entire set of variables. Because each factor had at least three items loading at .5 or greater, the researchers considered both stable factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The final version of the INCA is a 14-item instrument using a 4-point Likert scale to assess participant responses from 1 (*strongly disagree*) to 4 (*strongly agree*). The 6-item Supportive Network subscale includes items such as “My friends support me as I work toward my goals,” and “My family’s support makes me feel stronger.” The 8-item Belief in Self subscale includes items such as “My study habits are effective,” and “I know what I will do after graduation.” (Pester et al., 2018).

Data Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS, 26). Scores on three instruments measured the predictor variables for this study. The data was screened for errors of entry, missing data, and checked for outliers, normality, linearity, and homoscedasticity. As a result, it was found that all scores were within the appropriate range between the minimum and maximum score of each scale. Also, data were evaluated for coding errors and missing or invalid values. The researcher examined the entire data set for missing data and found two variables with missing values. One participant did not report a score for an item on the Relational Skills Inventory, and another did not report an item on the Achievement Motivation

Scale. These two values were missing completely at random (MCAR). The researcher addressed these missing values by inputting values using the series mean replacement method.

To meet the needs of this study, univariate, bivariate, and multivariate analyses were utilized. Frequencies, descriptive statistics, independent t-tests, a Pearson product correlation, and regression analyses were employed to evaluate relationships between the independent and dependent variables. The goal was to determine the combined predictive ability of resilience, achievement motivation, and relational skills for predicting academic performance as measured by estimated self-rating among undergraduate college students and adjustment to college as measured by the INCA. Descriptive statistics provided information on the sample of the study.

Limitations

The study relied on student self-reported information for estimated GPA and level of performance. Self-reported responses are subject to response bias and increased error in reliability and validity due to social desirability, which is the tendency of some respondents to report an answer in a way they deem to be more socially acceptable than would be their "true" answer (Morgado et al. al., 2017). Additional limitations of this study included investigating only three of the many possible non-cognitive variables that might predict academic performance and student adjustment. The researcher does not imply that variables under investigation are the only factors that could predict academic performance or adjustment of undergraduate college students. Instruments utilized in this study present limitations. While the psychometric properties support three of the four measures included in this investigation, the Relational Skills Inventory is supported by its content validity only. An Exploratory Factor Analysis (EFA) and a Confirmatory Analysis (CFA) are being conducted on the RSI (R. L. Smith, personal communication, May 1, 2019). The Inventory of New College Student Adjustment (INCA) (Watson & Lenz, 2018) was

developed to assess the adjustment difficulties experienced by first-year college students. In this study, the INCA is used to investigate adjustment difficulties of juniors and seniors in college.

Delimitations

The following delimitations were imposed on this study:

1. The population was limited to undergraduate college students at a particular institution in South Texas.
2. The Brief Resilience Scale (Smith et al., 2008) as an accurate measure of resilience.
3. The Achievement Motivation Measure (Smith et al., 2019) as an accurate measure of achievement motivation.
4. The Relational Skills Inventory (R. L. Smith, personal communication, May 1, 2019) as an accurate measure of relational skills.
5. The Inventory of New College Student Adjustment (Watson & Lenz, 2018) as an accurate measure of adjustment to college of juniors and seniors.
6. Perceived academic performance is measured using students' self-reported performance rating. Self-reported responses are subject to response bias and increased error in reliability and validity due to social desirability, which is the tendency of some respondents to report an answer in a way they deem to be more socially acceptable than would be their "true" answer (Morgado et al. al., 2017).

Definition of Terms

For the purposes of this study, the following definitions apply:

Achievement motivation

The need to perform well or the striving for success, evidenced by persistence and effort in the face of difficulties (McClelland, 1961, p. 36)

Achievement Motivation Theory

A theory of motivation identifying three learned motivators all individuals have: a need for achievement, a need for affiliation, and a need for power (McClelland, 1961)

Achievement Thinking (McClelland et al., 1953; Smith, 2015)

Identified thought processes of high achievers, which include *Need (N)*—Deeply wanting to achieve something; *Success Feelings (SF)*—Good feelings after success; *Failure Feelings (FF)*—Bad feelings after failure (see Smith, 2015 for the complete listing of ten achievement thoughts).

Achievement Behavior (McClelland, 1961)

McClelland described the following behaviors associated with high achievement motivation:

- 1) *Moderate Risk Taking (MRT)*—Individuals with a high need to achieve seek out and participate in activities involving moderate risks.
- 2) *Use of Immediate Concrete Feedback to Modify Goals (ICF)*—High achieving individuals want immediate concrete feedback so they can assess their performance and modify their behaviors accordingly.
- 3) *Personal Responsibility (PR)*—High achievers like to participate in activities in which they can take personal responsibility for their success and failures.
- 4) *Researching the Environment (RE)*—High achieving individuals actively and purposefully research the environment with the intention of discovering ways in which they accomplish their goals.

College Adjustment

A multidimensional construct comprised of an individual's ability to cope with the demands of academic work and the social environment of university life, as well as his or her sense of well-being and overall attachment to the academic institution (Baker & Siryk,

1999; Ribbe, Cyrus, & Langan, 2016), as measured by the Inventory of New College Student Adjustment INCA (Watson & Lenz, 2018).

Demographic Variables

Variables that are categorized as background characteristics include gender, age, and ethnicity.

Estimated Grade Point Average (GPA)

Students estimated overall grade point average in high school and at the midterm of their current semester enrolled.

Estimated Level of Performance

Students estimate of their overall performance in college so far.

Perceived Academic Performance

Students' self-reported performance rating, which was rated on a 5 point scale: 1= Low; 2= Below Average; 3= Average 4= Above Average 5= Excellent.

Relational Skills

How individuals interact with others and in groups. (Uhl-Bien, 2006).

Resilience

An individual's capacity to overcome adversities and successfully adapt to their environment. (Pidgeon, et al., 2014; Wagnild & Young 1993).

Retention

Regarding education research, *retention* is staying in school until completion of a degree. (Hagedorn, 2006).

Organization of Future Chapters

The present study focused on the strength-based factors and level of achievement of undergraduate college students. This chapter provided an overview of and rationale for the current study. Chapter

II contains a comprehensive review of the related literature and previous research in this area.

Chapter III describes the research design, methodology, and procedures of the study. Chapter IV includes a manuscript which is comprised the following sections: abstract, research method, results of the study, discussion and implications, limitations, and conclusion.

CHAPTER II: LITERATURE REVIEW

Academic Achievement and Success

There is a large body of literature focusing on the importance of self-belief in education. Theories and empirical studies of self-efficacy (see Bandura, 1977) and self-concept (Shavelson, Hubner, & Stanton, 1976) originated in the late 1970s and have gained in popularity over the past several decades, partly because of large-scale studies results conducted in the United States, the National Assessment of Educational Progress (NAEP) and internationally, Programme for International Student Assessment (PISA). Stankov, Lee, Luo, and Hogan (2012) suggested that the strongest predictor of performance appears to be a self-belief construct – referred to as Confidence. One reason why this construct is so influential in educational research is its effect on school achievement, performance, and link to students' motivation and expectations. Research on the constructs of self-concept and self-efficacy has evolved independently even though on face value, the constructs are quite similar. Subsequently, both conceptual analyses and empirical evidence comparing these two constructs appear to have settled on the conclusion they are indeed different (Bong & Skaalvik, 2003; Ferla, Valcke, & Cai, 2009; Lee, 2009). Briefly, self-concept, referring to one's perception of self, is believed to relate to one's performance. (Stankov, 2014).

Kyoshaba (2009) found that admission scores, which include direct entry scores, diploma points, and mature age points are also linked to academic performance. If the admission points are high, then the academic performance is likely to be high, and if admission points are low, then academic performance may be low. This argument is supported by Geiser and Santelices (2007), Bratti and Staffolani (2013), and McDonald et al. (2001), whose research findings indicate that previous performance affects future performance (Kyoshaba, 2009).

Research has been conducted on the validity of high school grades in predicting student success beyond the freshman year; Geiser and Santelices (2007) supported the proposition that a

students' high-school grade point average is a good predictor of college grades. The Geiser and Studley (2002) study sampled 80,000 students who were admitted to the University of California and tracked over four years. The data on college outcomes, including cumulative grade point average and graduation, were examined relative to students' high school records. Key findings supported the position that high school grades are a strong predictor of four-year college outcomes for all academic disciplines. Research (Geiser & Santelices, 2007; Hiss & Franks, 2014) also found evidence to suggest that high school grades of students in the United States were a good predictor of academic performance in college. Consistent with prior research, a study by Hodara & Cox (2016) found that high school grade point average was a stronger predictor of college performance than were standardized exam scores.

Academic achievement is a major outcome of education. The product is tangible proof that one has engaged in active learning. In college, academic achievement is most often measured through GPA. However, achievement was not always measured in this manner, but instead on a mentorship model (Hartmann, 2012). This mentorship model involved teachers working in close proximity with their students, interacting with them to ensure that learning was occurring. When students completed their studies, they entered the workforce, not with a diploma, but with the knowledge imparted to them by their teacher. According to Hartmann (2012), around the 19th century, at the height of the Industrial Revolution, William Farish, a professor of chemistry at the University of Cambridge, in his attempt to have a measure of student performance, applied the grading system to education. This system, employed in factories, was implemented at Yale College in 1785, where students were ranked by levels based on their performance (Gehrz, 2012). This method was soon adopted by the College of William and Mary in 1875 and Harvard in 1877 (Durm, 1993; Gehrz, 2012). With this evolution came the adoption of a system called the grade-point-average, GPA, which is still in use today. With an ability to assess the academic achievement

of large numbers of students, however, comes the difficulty in being able to provide appropriate interventions when those students experience academic failure and/or low achievement.

Responding to these growing concerns among educational stakeholders about the efficacy of the grading method and the decline in educational effectiveness, Walberg developed the Educational Productivity Theory (EPT), which operated on the premise there are nine factors which influence affective, behavioral, and cognitive learning (McGrew, 2008). Using an industrialized model to explain student achievement, Walberg (2003) summarized that the learning productivity problem is better known and even more acute over time. Vastly increased spending and many school reforms thus resulted in stagnant achievement during the past quarter century, even though children's measured intelligence or capacity for learning increased. Unlike most sectors of the American economy that steadily increase, schools become less, rather than more efficient, a serious matter given the size of the education sector and the increasing importance of learning in the American economy and society.

Realizing this decline in school productivity and its impact on almost every facet of society, Walberg (1984) noted that "education may be our largest enterprise in terms of the number of people involved, the value of human time required, and the capital and operating expenditures budgeted" (p. 19). Walberg (1984, 2003) postulated that in order for students to be successful, there must be a balance among student ability, age, motivation, time spent on learning, quality of instruction, home environment, school environment, peer group choices, and time spent out-of-school. Aligning with a balance of aptitude, instruction, and environment, the nine factors are interrelated with varying levels of effect (McGrew, 2008; Walberg, 1984), resulting in favorable achievement outcomes.

The first three noted factors of the EPT are ability, age of development, and motivation, reflecting the characteristics of the student (McGrew, 2008). Walberg (2003) noted that "learning

is fundamentally a psychological process; student motivation, instruction, and other psychological factors are the well-established, consistent, and proximal causes of learning” (p. 1). The innate student-based influences of academic achievement make motivational factors a critical, yet virtually unknown, characteristic factor of this population. Other external factors that may play a strong role must also be acknowledged. Student-driven intrinsic factors such as academic self-efficacy, academic motivation, and mindset have also been confirmed through research as significant factors that impact student achievement. Predictors of strong academic performance among college students include a robust commitment to learning and investment in academic success. When individuals experience feelings of an inability to succeed or difficulty meeting their academic goals, their desire to explore other options for future career paths increases and is a strong predictor of students leaving college early (Hemphill et al., 2014).

Graduation Rate

The six-year graduation rate (150 percent graduation rate) for first-time, full-time undergraduate students who began seeking a bachelor’s degree at a four-year degree-granting institution in fall 2010 was 60%. By 2016 some 60% of students had completed a bachelor’s degree at the same institution where they started in 2010. The six-year graduation rate was 59% at public institutions, 66% at private nonprofit institutions, and 26% at private for-profit institutions. The six-year graduation rate was 63% for females and 57% for males; it was higher for females than for males at both public (62 vs. 56 percent) and private nonprofit (68 vs. 63 percent) institutions. However, at private for-profit institutions, males had a higher six-year graduation rate than females (28 vs. 23 percent).

Six-year graduation rates for first-time, full-time students who began seeking a bachelor’s degree in fall 2010 varied according to institutional selectivity. In particular, six-year graduation rates were highest at institutions that were the most selective (i.e., those that accepted less than

25% of applicants) and were lowest at institutions that were the least selective (i.e., those that had open admissions policies). For example, at four-year institutions with open admissions policies, 32% of students completed a bachelor's degree within six years. At four-year institutions where the acceptance rate was less than 25% of applicants, the six-year graduation rate was 88% (NCES 2018). "Right now we've got an education system that works like a funnel when we need it to work like a pipeline," said Vice President Biden. "We have to make the same commitment to getting folks across the graduation stage that we did to getting them into the registrar's office. The dreams and skills of our college graduates will pave the way to a bright economic future for our nation" (US Dept. of Education, 2011, para. 2).

Undergraduate Student Retention

To be serious about student retention, institutions would recognize that the roots of attrition lie not only in their students and the situations they face, but also in the very character of the educational settings, now assumed to be natural to higher education, in which they ask students to learn (Tinto 1999). An extensive body of research (Flowers, 2006; Hileman, 2013; Jean, 2010; Karaivanova, 2016); Pascarella & Terenzini, 1983; Tinto, 2006; Trolan et al., 2016; Wayt, 2012; Zhal, 2015) identifies the conditions that best promote retention, in particular during the students' first year of college.

Five conditions stand out as supportive of retention, namely expectations, support, feedback, involvement, and learning (Tinto 1999; Tinto, 2006). First, students are more likely to persist and graduate in settings that hold high and clear expectations for student achievement. No one rises to low or unclear expectations. Unfortunately, it is too often the case that institutions expect too little of their students or construct classroom activities such require too little of their effort. At the same time, students do best in settings where expectations are clear and consistent. This is particularly evident in the domain of academic advising. Students need to understand

precisely what is expected of them and what is required for successful completion of a program of study. Second, support is a condition that promotes student retention. Research points to two types of support that promote retention, namely academic and social support (Tinto, 2006).

Unfortunately, many students may enter the university insufficiently prepared for the rigors of university study. For them, as well as for others, the availability of academic support, for example, in the form of developmental education courses, tutoring, study groups, and academic support programs such as supplemental instruction is an important condition for their continuation in the university (Ishitani, 2016). Also important is the availability of social support in the form of counseling, mentoring, and ethnic student centers. Such centers provide much-needed support for individual students and a haven for groups of students who might otherwise find themselves out of place in a setting where they are a distinct minority. For new students, these centers can serve as secure, knowable ports of entry that enable them to navigate the unfamiliar terrain of the university safely.

According to research by Kuh et al. (2005) it has become increasingly evident that academic, if not social, support is more effective when it is contextualized to student lives. In regard to academic support, for example, it proves to be more effective when it is connected to students' daily learning needs in ways that enable them to utilize the support they receive to learn and succeed in the classes/subjects in which they are registered. It is for this reason that programs like supplemental instruction are so useful. Third, feedback is a condition for student success. Students are more likely to succeed in settings that provide faculty, staff, and students' frequent feedback about their performance (Kuh et al., 2005). Not only is it important to have entry assessment of learning skills and early warning systems that alert institutions to students who need assistance but also to employ classroom assessment techniques such as those described by Tom Angelo and Patricia Cross and those that involve the use of learning portfolios (Tinto, 1999).

These techniques are not to be confused with testing but with forms of assessment, such as the well-known “one-minute” paper, that provide both students and faculty information on what is or is not being learned in the classroom (Tinto, 2006). When used frequently, such techniques enable students and faculty alike to adjust their learning and teaching in ways that promote learning. Just as importantly, early and frequent feedback about student performance, in particular during the first year of study, can be used to trigger the provision of support in ways that enable students to continue their studies. Fourth, involvement is a condition for student retention. Educational theorists such as Alexander Astin, Ernest Boyer, George Kuh, and Vincent Tinto have long pointed to the importance of academic and social integration or what is more commonly referred to as involvement or engagement to student retention (Tinto, 1999; Tinto, 2006). The more students are academically and socially involved, the more likely are they to persist and graduate (Tinto, 1999). A wide range of studies in a variety of settings and for a range of students have confirmed that the more frequently students engage with faculty, staff (Flowers, 2006; Hileman, 2013; Jean, 2010; Karaivanova, 2016; Pascarella & Terenzini, 1983; Tinto, 2006; Trolan et al., 2016) and their peers (Wayt, 2012; Zhal, 2015), the more likely, other things being equal, that they will persist and graduate. Simply put involvement matters.

Finally, learning is a condition for retention. The more students learn, the more value they find in their learning, the more likely they are to stay and graduate (Ishitani, 2016; Tinto, 1999; Tinto, 2006). This is particularly true for more able and motivated students who seek out learning and are, in turn, more likely to respond to perceived shortcomings in the quality of learning they experience on campus (Ishitani, 2016). Lest we forget the purpose of higher education is not merely that students are retained, but that they are educated. In the final analysis, student learning drives student retention (Tinto, 2006).

In summary, students are more likely to persist when they find themselves in settings that are committed to their success, hold high expectations for their learning, provide needed academic and social support and frequent feedback about their performance, and actively involve them with other students and faculty in learning (Tinto, 2006); Zhal, 2015). As Tinto (2006) concludes, the key concept is that of the educational community and the capacity of institutions to establish educational communities that actively involve students with other members of the institution. O'Banion (2011) identified three pertinent issues that affect the community college student: low-income, under-preparedness, and first-generation status.

Attrition Rate of College Students

The role of students' educational expectations has also been addressed, suggesting that educational goals and student departure are negatively related. Family income was associated with student attrition behavior; Beer and Lawson (2017) found that a higher level of socioeconomic status had a positive effect on academic and social integration and ultimately influenced one's enrollment decision. Parents' educational attainment has been shown to affect college student attrition (Beer & Lawson, 2017). Particularly, lower persistence rates among first-generation students were highlighted in previous studies (Ishitani 2016). Using institutional data, Ishitani (2003b) discovered a higher risk of departure among first-generation students in their first year of college. First-generation college students persisted at a lower rate and attained a lesser number of degrees than their counterparts. Institutional characteristics have been associated with persistence of college students. Bradford and Farris (1991) found that private institutions typically had higher degree attainment rates (56%) than public institutions had (45%). The effects of institutional type and size have also been examined in other studies (Beer & Lawson, 2017, 2018; Cherastidtham, Norton, & Mackey, 2018).

Impact of Attrition on Universities

To hold institutions accountable, the federal government has mandated regulations for indicators of success as measured by student retention and timely degree attainment (Jassal, 2008). State and federal governments have tied funding mechanisms directly to these student performance measures. Although government funding has not kept pace with the financial needs of higher education, institutions do rely on these funds for their fiscal sustainability (Padro, 2007). The public has also taken considerable interest in student performance measures. One of the primary publications that annually ranks American colleges and universities, the *U.S. News and World Report*, has added first-to-second year retention and graduation rates to their system of evaluating baccalaureate-level institutions (Jassal, 2008). Research findings indicate that first-generation students are more likely than their peers to leave a four-year institution at the end of the first year, less likely to stay enrolled in a four-year institution or be on a persistence track to a baccalaureate degree after three years, and are less likely to stay enrolled or earn a baccalaureate degree after five years (Pascarella et al., 2004). Within this category, the enrollment pattern of stopping-out is also researched. Stop-outs are students who begin college, leave, and then return to resume college (Jassal, 2008). A diverse population of college graduates is critical to the advancement of the United States as a competitive global market and a socially responsible nation. Given the increasing pressure to remain competitive in this knowledge-driven economy, it is in the best interest of the United States to take action toward increasing the number of students entering college who graduate with at least a baccalaureate degree (Engle & Tinto, 2008).

Research related to the success of undergraduate students should be shared across offices, programs, administration, and disciplines. Institutions must focus on the entire sequence of educating and retaining college students (Jassal, 2008). Due to the significant impact that college degree attainment has on institutions, economic viability, and especially students, identifying

improved methods for supporting student development and increasing retention positively contributes to society as a whole. Specific knowledge about student retention, adjustment, and achievement will assist institutions with developing more strategic support services that better assist students in achieving academic success. Much of the research, even with the general population of undergraduate students, focuses solely on cognitive factors as predictors of academic success, persistence, retention, attrition, and degree attainment (Ting, 2003). The cognitive factors are generally limited to past achievements such as high-school GPA, class rank, types of courses taken, and SAT/ACT scores. These factors are also the generally accepted measures that have the greatest weight when making institutional admissions decisions.

Furthermore, many of the studies on first-generation students focus on retention from first to second year and cumulative GPA at the end of the first year. The emphasis on this timeframe is generally due to disproportionately high attrition rates for first-generation students from first to second year. However, given the substantial impact of timely degree attainment on the students, their families, institutions, and society, it is necessary to go beyond retention rates to determine the most indicative predictors and effective interventions for degree completion.

Attempts to Reduce Attrition

University attrition rates have increased from 12.5% in 2009, before the demand-driven system was phased in, to 14.8% in 2014 (Moodie, 2015). The United States has relatively high college dropout rates. According to a 2014 report by the Organization for Economic Co-operation and Development (OECD), the overall retention rate for full-time students at U.S universities stood at 74.4%. The institutions with the highest four-year retention rates were private, not-for-profit universities with 81.6%, while those with the lowest rates were four-year for-profit universities with 55%.

The *The New York Times*, painted an even gloomier picture. It was reported that less than 50% of all students in the country graduated in four years. With two more years added, graduation rates increased only to 60%. This means many students are leaving college in debt but with no degree. Griffith University conducted a study to identify the lead causes of attrition (Salmon 2018). The study revealed that the most common reason was personal difficulties. These related to health, finances, work, and family. Other causes listed were academic difficulties and dissatisfaction with the program or university chosen. The issue of part-time students also cropped up. Survey data showed that only 44.8% of part-time students graduate in eight years (Salmon, 2018).

Online education has experienced an expansion within higher education, and studies documenting factors positively influencing student attrition rates have increased as well (Gašević, Kovanović, Joksimović, & Siemens, 2014; Kranzow, 2013; Rice, 2014). Over 69% of higher education institutions are committed to increasing online enrollment, and online education has been steadily increasing by 10% each year (Forte, Schwandt, Swayze, Butler, & Aschcraft, 2016; Welch, Napoleon, Hill, & Roumell, 2014). Two important contributing factors identified in increasing student success, specifically in online classrooms include (1) the fostering of an increased sense of community with peers and institution and (2) online instructor support. Online instructor presence, specific and directed instructor retention strategies, and sense of community are important factors that must be addressed in faculty training and mentorship programs. Some of these components (instructor presence, sense of community, etc.) are components relevant to relational skills and resilience. Perhaps one might find that resilience becomes an important factor when completing courses online.

Reilience

The concept of resilience is one of the most studied constructs in the mental health field in the context of its facilitative role for positive psychological outcomes and protective function against adverse mental consequences (Beutel et al., 2017). Within the field of mental health, there is a range of conceptual definitions of resilience (Holdevici, Craciun, & Craciun, 2015; Mohanty, 2016). Despite ongoing debate on the conceptualization of resilience and the variety of approaches that are used to study this construct (Govender, Cowden, Asante, George, & Reardon, 2017), resilience is typically viewed as the successful adaptation to adverse life circumstances (Rathore, 2017). The term *resilience* has been defined as the ability to spring back from challenging life experiences and heal from stress (Smith et al., 2008) or the capacity of adapting successfully in the face of threats, tragedy, trauma, adversity, and any critical sources of stress and maintaining flexibility with balance while dealing with stressful circumstances (APA, 2010). In this sense, resilience is a dynamic process that manifests itself in response to life circumstances and individual personality profiles (Balgui, 2017).

In defining resilience, it is important to specify whether resilience is viewed as a trait, a process, or an outcome. For some, it may be tempting to take a binary approach in considering whether resilience is entirely present or entirely absent. However, in reality, resilience more likely exists on a continuum that may be present to differing degrees across multiple domains of life (Pietrzak & Southwick, 2011). Individuals who adapt well to stress in a workplace or an academic setting may fail to adapt in their personal life or their relationships. Resilience may change over time as a function of development and one's interaction with the environment (Kim-Cohen & Turkewitz, 2012). For example, a high degree of maternal care and protection may be resilience-enhancing during infancy but may interfere with individuation during adolescence or young adulthood. Also, the response to stress and trauma takes place in the context of interactions with

other human beings, available resources, cultures, religions, organizations, communities, and societies (Sherrieb, Norris, & Galea, 2010; Walsh, 2006). Each of these contexts may be more or less resilient in their own right and more or less capable of supporting the individual.

In the literature, resilient persons are identified as having the ability to successfully respond to stressful life events (Smith et al., 2008); individuals devoid of resilience skills cope with adverse circumstances by having a lack of response or expressing a more mechanical response to external stimuli (Moore & Fine, 1990). This might lead them to experience a lack of feelings associated with the particular life event. The resilience coping skills bear the idea that what is traumatic can be transformed; otherwise, a denial or no sense is possible, referring to an emptiness experience (Tosso, 2012).

Resilience is a critical variable associated with adaptation to the university environment (Wang, 2009). Research findings indicate that resilience reduces the risk of psychological distress, assists with the management of academic demands, and enhances academic outcomes while also facilitating effective coping strategies when faced with academic pressures (Wintre & Yaffe, 2000). In the absence of resilience, the stressors university students face have greater potential to negatively affect their mental health, increase psychological distress, and result in adjustment problems (Wintre & Yaffe, 2000; Pittman & Richmond, 2008). Previous research on resilience has primarily focused on individuals affected by short- and long-term adversities (Wang & Castaneda-Sound, 2008). Although a universal definition of resilience does not exist, resilience is widely considered as individuals' capacity to overcome adversities and successfully adapt to their environment (Khawaja, Moisuc, & Ramirez, 2014).

Definitions of resilience have ranged from a set of traits, an outcome, or a dynamic process that involves the exposure to stress or adversity, followed by successful adaptation (Pan, 2011; Pan, Fu Keung Wong, & Ye 2013). Connor and Davidson (2003) define resilience as personal

qualities that enable individuals to thrive when faced with adversity. Gilligan (2007) defines resilience as the ability to respond adequately and perform successfully in the face of adversity or to exceed expectations during hardships. Additionally, researchers have viewed resilience as a protective buffer that protects individuals against adversity (DeRosier, Frank, Schwartz, & Leary, 2013; Jackson, Firtko, & Edenborough, 2007). Overall, global findings suggest that resilience in the university environment is positively associated with greater mental health, as well as successful transition and adjustment to university life (Peng et al., 2012; Wang, & Castaneda-Sound, 2008; Wilks & Spivey, 2010).

Since the late 1970s, seminal studies on resilience have focused specifically on children's responses to and recovery from adverse circumstances (Garmezy, 1991; Rutter, 1979, 1985; Werner & Smith, 1982). According to Wright, Masten, and Narayan (2013), the study of resilience has occurred in four major waves. In a review of resilience research literature, Grafton, Gillespie, and Henderson (2010) summarized the four waves of research. The first wave of research identifies resilience as a set of characteristics a person could possess, such as hardiness, coping, and self-efficacy. In this wave of study, researchers examined the effects of major trauma or adversity on an individual's ability to cope and recover (Baron, Eisman, Scuello, Veyzer, & Lieberman, 1996; Wagnild & Young, 1993).

Major findings during the first wave were (a) that specific characteristics facilitate children and adolescents' likelihood of adapting to adverse circumstances, (b) these common characteristics can serve as "protective factors' that assist individuals to recover from and thrive despite adversity" (Grafton et al., 2010, p. 699), and (c) that the characteristics that make up resilience stem from both biological and psychological factors (Grafton et al., 2010). During this stage of research, little agreement was fostered among researchers about which characteristics were specifically common for everyone (Grafton et al., 2010). Research in the first wave of inquiry

ultimately lead to, “a paradigm shift away from merely identifying resilient characteristics to a second wave of inquiry—one of seeking to identify how these characteristics or qualities were acquired” (Grafton et al. 2010, p. 700).

The second wave of resilience research viewed resilience as a dynamic process in which someone experiences adversity followed by positive integration and learning from that experience (Gillespie, Chaboyer, & Wallis, 2007; Luthar & Cicchetti, 2000; Rutter, 1999). This view of resilience as a dynamic process allows us to see resilience as something that can be learned and taught (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007). Researchers employing this definition and using cognitive transformation practices found increases in self-efficacy, adaptability, and resilience (Jackson et al., 2007; Waite & Richardson, 2004). The second wave attempted to provide an understanding of the processes leading to the development of resilience (Wright & Masten, 2005). This wave adopted a developmental systems approach to understanding resilience and focused on positive adaptation in the face of adversity. The second wave of research on resilience also included the impact of cultural influences on resilience. Researchers started to examine the cultural traditions, religious rituals, and community services that were contributing to fostering resilience in youth (Wright & Masten, 2005).

The findings from previous investigations indicate that resilience can be acquired, it is a learned behavior (Neihart, 2006), and it is “ordinary magic” (Masten, 2001, p. 227). This led to the central component of the third wave of research: preventative interventions and policy shifts regarding resilience (Luthar & Cicchetti, 2000; Rutter, 2000). A fourth wave emerged, focusing on cultivating resilience by utilizing preventive interventions (Masten & Wright, 2010) and targeting several protective processes and demographic groups. Specifically, interventions focusing on promoting resilience through protective processes as mastery, social engagement, executive functioning skills, and emotion regulation evolved (DeRosier et al., 2013; Diamond, Barnett,

Thomas, & Munro, 2007; Park, Edmonson & Lee, 2012). Findings have policy implications that include recommendations for teachers, parents, and professionals who attempt to foster resilience in youth.

The fourth wave of resilience research is integrative using “epigenetic and neurobiological processes, brain development, and the ways that systems interact to shape development” (Wright et al., 2013, p. 16). Examples of this are researchers such as Wood and Bhatnagar (2014) and Cathomas et al., (2019) who are researching the role of neuroplasticity in resilience.

Achievement Motivation

Achievement motivation is defined as “the need to perform well or the striving for success, evidenced by persistence and effort in the face of difficulties” (McClelland, 1961, p. 36).

Achievement motivation is viewed as “the striving to increase or to keep as high as possible, one’s own capabilities in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either succeed or fail” (Heckhausen, 1967, pp.4-5). Studies of achievement motivation (McClelland, 1961; Wigfield & Eccles, 1992, 2000), and resilience (Richardson, 2002) offer a framework for this study of strength-based non-cognitive factors related to the academic performance of college students. The conceptual framework of this study included the following theories: metatheory of resilience and resiliency (Richardson, 2002), achievement motivation theory (McClelland, 1961), and relational theory (Uhl-Bien, 2006). The metatheory of resilience and resiliency illustrates findings from three waves of resiliency inquiry: resilient characteristics of individuals are identified, the process of acquiring those resilient qualities is recognized, and the motivational force driving individuals toward self-actualization is discovered (Richardson, 2002).

Research on achievement motivation has a long and distinguished history (Alschuler, 1971, 1973; Atkinson, 1957, 1964; Atkinson & Feather, 1966; Dweck, 2000; Eccles, Wigfield, &

Schiefele, 1998; Kolb, 1965; McClelland, 1958, 1961, 1965; McClelland, Atkinson, Clark & Lowell, 1953; McClelland & Winter, 1969; Murray, 1938; Singh, 2011; Smith, 2011, 2015; Smith & Troth 1975; Steinmayr & Spinath, 2009; Vroom, 1964; Weiner, 2012). Achievement motivation can be defined as “the striving to increase, or to keep as high as possible, one’s capabilities in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either succeed or fail” (Heckhausen, 1967, pp.4-5). Schuler & Prochaska (2001) define achievement motivation as a general behavioral orientation. A high-achievement motivation in people has been associated with success and wealth in human societies (McClelland, 1961). To produce adequate conditions for the development of a high-achievement motivation, it is necessary to understand how achievement motivation is formed, and how it can be translated into successful action. McClelland and Atkinson’s (1953) achievement and motivation theory is based on personality characteristics that are manifested as a dispositional need to improve and perform well according to a certain standard of excellence. For over three decades, McClelland and his associates researched high-achieving individuals. Findings by McClelland and others led to a theory of achievement motivation identifying cognitions and behavior patterns common among high achievers (Smith, Karaman, Balkin, & Arora, 2019). Findings targeted a prototype of the high-achieving individual as one who utilizes a set of thoughts and behavior strategies when embarking upon a task or assignment. Research findings (Alschuler, 1971; Atkinson, 1957; McClelland, 1958; McClelland, Clark, & Lowell, 1953) supported a set of thoughts associated with high achievers. The ten thoughts of high achievers, updated to current society (Smith, 2015) are presented: Achievement Imagery, Need, Action, Hope of Success, Fear of Failure, Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help.

Decades ago, researchers began to measure goal commitment as related to achievement motivation (Hollenbeck et al., 1989). They invested considerable effort because goal setting is not

a homogeneous construct. Tubbs (1993) identified three components of goal commitment. The first component involves the processes of weighing and evaluating potential goals. During these processes, one calculates mainly values and expectancies that affect the strength of motivational tendencies for specific goals. The second component contains the result of these evaluative processes focusing on calculations of values and expectancies and leading to setting a personal goal. This component is also related to the decision to attain this particular goal. The third component of goal commitment is characterized by maintaining the set goal and by staying persistent even when faced with hindrances. Future research will show whether it will be possible to develop differentiated measurement procedures based on these considerations.

Concerning goal commitment in goal-oriented action, people seem to be able to use stable dispositions. They either persist tenaciously in pursuing their goals, or they adjust flexibly to new or other goals. Brandtstädter & Renner (1990) described two scales to measure “tenacious goal pursuit” and “flexible goal adjustment.” Their results show relations between these different strategies and age. Older people adapt more often flexibly instead of pursuing their goals tenaciously against hindrances. A high-achievement motivation in people guarantees success and wealth in human societies. To produce adequate conditions for the development of a high-achievement motivation, it is necessary to understand how achievement motivation is formed and how it can be translated into successful action. By the importance of this kind of motivation, a series of instruments have been designed to measure the different components of achievement motivation reliably, validly, and practically. The existing instruments can be used in research and practical settings.

Relational Skills

Relational Skills refers to the attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). Relational Leadership Theory (RLT) emphasizes an entity

perspective that focuses on identifying attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). The term relational is used to describe a view of leadership and organization as human social constructions that emanate from the rich connections and interdependencies of organizations and their members (Bradbury & Lichtenstein, 2000; Uhl-Bien, 2006). Relational attributes have been studied as they relate to leadership, the hierarchical structure within organizations, and business and government. However, there is not sufficient existing research involving relational attributes or skills and student success or retention.

Emotions play a crucial part in human interactions and dynamics (Ashkanasy, Hartel & Zerbe, 2000; Humphrey, 2002; Smith, 2006). Rogers (1942) described the therapeutic relationship as one that “represents a quality of social bond which differs from any the client has heretofore experienced,” and said that the relationship could further be described as being different from most ordinary life relationships (p. 87). Cashdan (1982) states, “The therapist-client *relationship* can be viewed as the primary arena for meaningful psychotherapeutic change” (p. 215). However, in earlier writings, Cashdan (1973) speaks of how the therapist needs to master techniques in order to solve and ameliorate problems presented by the client. Cashdan (1973) expands on this by stating that conducting therapy involves more than just learning techniques, but rather that “it involves learning a system of psychotherapy which includes as just one of its features the acquisition of technique” (p. xi). Based on these statements by Cashdan, it could be said that the therapeutic relationship, as the main vehicle of change, can be established and maintained with the use of basic relational skills. Research conducted by Asay and Lambert (2000) shows that the therapeutic relationship accounted for at least 30% of the variance in therapeutic outcomes.

Yalom (1998) described the relationship between the therapist and the client as *the therapy*, and according to Rogers (1951), the role of the therapist is a highly important part of the human equation. However, in an evaluation of the client-centered position, which advocates the role of the

therapist as being central to the therapeutic relationship, Horvath (2000) points out that this centrality creates an unusual relationship in that only one person (the therapist) in the dyad is responsible for creating an arena for change. Snyder and Ingram (2000), in their book entitled *Handbook of Psychological Change*, conclude that therapeutic change is dependent on three variables, namely the client, the therapist, and the theory and techniques used. Further exploration of these variables by these authors illustrates that clients are agents of their own experiences; relative to the contribution of theories and techniques, the person of the therapist is considered to be of great importance (Snyder & Ingram, 2000). However, it is the opinion of Boscolo and Bertrando (1996) that change is dependent on the therapist's ideas of what could be considered a change. For example, some therapists aim to change the presenting symptoms, while others attempt to change clients' unconscious conflicts. Boscolo and Bertrando (1996) speak of two variables, namely time and change, where the latter is directly affected by the therapist's idea of the time needed to bring about change. This may have an important pragmatic effect on the promotion, acceleration, or slowing down of change (Boscolo & Bertrando, 1996). Watzlawick et al. (1974) propose that therapists cannot change people any more than they can control them – change is the automatic and inevitable by-product of interaction. However, change, as defined by Andolfi (1979) in the practice of therapy, may occur when a person can experiment and thereby to learn alternative modes of cognition, feeling, and behavior. Thorngren and Kleist (2002) view client conflicts differently and state that client conflicts could be a result of maladaptive relational patterns, faulty beliefs about the self, and unrealistic expectations of others, and, therefore, hypothetically, change in one of these areas could result in a change in the other areas.

In an attempt to unite Rogerian perspectives and post-modernistic thinking, Walker (2001) suggests that there is an overlapping confluence of empathy, unconditional acceptance, and therapist genuineness. Walker (2001) postulates that these three conditions exist simultaneously

and that “consistent, empathic contact creates a context in which unconditional acceptance becomes the natural, real, felt experience of the therapist” (p. 55).

We consider the relational perspective and [the approaches within it] ... to be at the forefront of emerging leadership thrusts. The relational focus is one that moves beyond unidirectional or even reciprocal leader/follower relationships to one that recognizes leadership wherever it occurs; it is not restricted to a single or even a small set of formal or informal leaders; and, in its strongest form, functions as a dynamic system embedding leadership, environmental, and organizational aspects (Hunt & Dodge, 2000, p. 448).

While the concept of relationship-oriented behavior has been around since the earliest formal studies of leadership in organizations (Stogdill & Coons, 1957), the term relational leadership is surprisingly new (Brower et al., 2000; Drath, 2001; Murrell, 1997; Uhl-Bien, 2003, 2005). Because of this, its meaning is still uncertain. In traditional management discourse, the term relational means that “an individual likes people and thrives on relationships” (Lipman-Blumen, 1996, p. 165). Traditional research on leadership examines behavioral styles that are relationship-oriented (Likert, 1961), meaning considerate and supportive (Stogdill, Goode, & Day, 1962) or leadership behaviors focused on developing high quality, entity perspectives assume individual agency—that “organizational life is viewed as the result of individual action” (Hosking et al., 1995, p. x). Individuals are thought of as “entities,” with clear separation between their internal selves and external environments. These individuals are seen as possessing “the capacity to reason, to learn, to invent, to produce, and to manage” which serves as the basis for assumptions that “the ‘reality’ of management is understood as individual creation and control of order” (Hosking et al., 1995, p. x). Studies that align with this perspective explain relationships based on the properties and behaviors of interacting individuals or organizations (Dachler & Hosking, 1995). The predominant entity perspectives exploring relational leadership issues are the “relationship-based”

approaches to leadership research (Graen & Uhl-Bien, 1995). From this perspective, leadership can be seen as a two-way influence relationship between a leader and a follower aimed primarily at attaining mutual goals (Brower et al., 2000; Graen & Scandura, 1987; Graen & Uhl-Bien, 1991, 1995; Hollander, 1978, 1979). Relational Leadership Theory is the study of both *relationships* (interpersonal relationships as outcomes of or as contexts for interactions) and *relational dynamics* (social interactions, social constructions) of leadership. These can be seen as representing the difference between leadership in the condition of “already being organized” versus the condition of leadership as “a process of organizing” (Hosking, 1988). Historically, the former has tended to focus *less* on the process (and more on identifying associations between existing variables) and the latter *more* on the process (though in local processes more than in broader contexts; Hosking, 1988; Uhl-Bien, 2006). The focus of Relational Leadership Theory research is a better understanding of the relational dynamics—the social processes—that comprise leadership and organizing. Relational Leadership Theory sees leadership as the process by which social systems change through the structuring of roles and relationships (Fletcher, 2004; Graen & Scandura, 1987; Seers, 2004; Senge & Kaeufer, 2001; Uhl-Bien, 2003, 2005, 2006).

In relationship-based approaches, the focus is on interpersonal relationships, most often among leader–member dyads (Graen & Scandura, 1987; Uhl-Bien et al., 2000), but also leadership relationships that occur between a leader and a group (Hollander, 1964; Howell & Shamir, 2005) or among triads (Offstein, Madhavan, & Gnyawali, 2006) or larger collectivities (Balkundi & Kilduff, 2005; Graen & Graen, 2006; Graen & Uhl-Bien, 1995). Relationship-based perspectives view relationships in a traditional sense of the word—a relationship as a particular type of connection existing between people related to or having dealings with each other (American Heritage Dictionary, 2000)—and relational processes are considered relative to individual characteristics that leaders and followers bring to their interpersonal exchanges

Relational skills require students to interact with peers, which has been shown to have a positive relationship with student gains and satisfaction with college (Kezar & Moriarty, 2000). The interactions between students and faculty is another important component of relational skills as applied to an academic setting. McFadden (2014) found that these student-faculty interactions are positively associated with a wide range of student outcomes, such as students' self-assessed leadership abilities and social self-confidence. Faculty members play an essential role in influencing student learning both in and out of the classroom (McMurtrie, 2011). Uhl-Bien et al. (2000) describe the relationship development process as beginning with two individuals who engage in an interaction or exchange sequence (a series of interactions). The nature of these interactions depends on several things. First, it depends on the characteristics each brings to the relationship, including their personal, physical, and psychological makeup that remains relatively stable and disposes them to approach interpersonal situations in a certain way (Phillips & Bedeian, 1994). Second, it depends on the individuals' expectations of the exchange, which are developed based on experience, outside information about the other, and implicit leadership theories or "schemas" (Lord & Maher, 1991). Third, it depends on their assessment of and reaction to the exchange both while it is occurring and in retrospect (Blau, 1964; Homans, 1961; Jacobs, 1971; Uhl-Bien et al., 2000).

Spencer-Rodgers (2001) argued that students' sense of purpose would be enhanced as the frequency of student-faculty interactions increased, regardless of whether the interaction was formal or informal. The literature above supports the important role of faculty members in enhancing students' adjustment and supporting their success.

Several scholars examined the beneficial effects of relational skills among students with diverse backgrounds. Valdez (2015) investigated the relationship between students and faculty and student adjustment to college. They found that compared to students' background characteristics,

students' relationships with faculty members act as strong predictors of college adjustment. Andrade (2006) found that student-faculty relationships were strong predictors of student adjustment to college among students of color. Also, Anaya and Cole (2001) examined the impact of relational skills on college student academic achievement among international students; they found that relational skills, both academic and personal interactions, and perceived quality of student-faculty interactions were positively associated with international student's college grades. Yuan (2011) also claimed that relational skills had a positive association with the self-rated public speaking ability of male international students and perception of capacity to influence others for female international students. Relationships—rather than authority, superiority, or dominance—appear to be key to new forms of leadership (Drath, 2001). Yet, while relationships are at the heart of many of the new approaches emerging in the leadership literature, e.g., distributed (Gronn, 2002), distributive (Brown & Gioia, 2002), shared (Pearce & Conger, 2003), post-heroic (Fletcher, 2004), and complexity (Marion & Uhl-Bien, 2001), we know surprisingly little about how relationships form and develop in the workplace. Moreover, the investigation into the relational dynamics of leadership as a process of organizing has been severely overlooked in leadership research (Hosking, 1988; Hosking & Fineman, 1990).

The Relational Skills Inventory (RSI) is designed to measure the interactive relationship skills of individuals (R. L. Smith, personal communication, May 1, 2019). Relational skills play a role in business, education, government agencies, and almost every setting where individuals interact. The Relational Skills Inventory was developed based on Relational Leadership Theory (RLT) by Uhl-Bien (2006), Humanistic Theory by Rogers (1959), Trust Theory by Castelfranchi and Falcone (2010), and Social Cognitive Theory by Bandura (2001). The RSI involves four factors: the relational attributes, the core communication skills, trust, and the safe environment (R. L. Smith, personal communication, May 1, 2019). Core Communication Skills Factor is based on

Humanistic Theory, Relationship Centered Counseling, and Rogers' Core conditions (empathy, congruence, and unconditional positive regard). Rogers, who is the leading representative of the humanistic psychology, emphasizes that the human nature is good and when humans are left to their own devices, they have the tendency for self-actualization (Rogers, 1980). Yalom (1998) described the relationship between the therapist and the client as the therapy, and according to Rogers (1951), the role of the therapist is a highly important part of the human equation.

College Student Adjustment

One of the earliest definitions of college adjustment was proposed by Arkoff (as cited in Abdullah, Elias, Mahyuddin & Uli, 2009) and referred to a student's interaction with his or her environment. This definition referenced students' academic achievement and personal growth as measures of adjustment. Consistent with this proposed explanation of the adjustment process, well-adjusted students obtained good grades, passed their courses, and graduated. According to the ecological theory proposed by Bronfenbrenner (1979), each person's actions are defined by multiple layers of influences, and such influences operate as different systems. College students face several challenges, which include greater academic demands, greater independence, and less academic structure. The adjustment to college has been identified as an important outcome in its own as well as an important predictor of educational outcomes. Through a review of the existing literature, Credé and Niehorster (2012) found that college adjustment is predictive of college academic performance and a very good predictor of college retention. The relationship between college adjustment and college retention has been identified by others as well (Robbins, Oh Le, & Button, 2009).

Adjusting to the college transition process is a challenge for all students entering the higher education system. Students who represent the first generation in their family going to college face additional hurdles to successfully obtaining their college degrees (Gibbons, Rhinehart, & Hardin

2019). For them, making such a change represents intergenerational and personal difficulties greater than the usual academic and social transition issues faced by all college students (Olenchak & Hebert, 2002; Terenzini et al., 1994). Psychological coping is also known to impact college adjustment (Daugherty & Lane, 1999; Kerr, 1995; Larose, Robertson, Roy, & Legault, 1998; Wintre & Yaffe, 2000). Psychological well-being was the most important contributor to overall college adjustment for a mostly female college population from a Canadian commuter university (Wintre & Yaffe, 2000).

Making higher education even more difficult for first-generation students is the fact that they tend to come in less prepared academically (Davis, 2010) and psychologically because of their family environment's lack of experience with the demands and expectations required in college. These students, uncertain about their abilities, and their internal critical self-evaluations have limited motivation and low academic performance (Mitchell, 1997). The ability to adapt and adjust to the changes and challenges that college brings is important for all students.

In previous research, many aspects of college adjustment have been explored, including family relationship dynamics. Some of the studies have focused on academic and GPA outcomes (Cutrona et al., 1994; Fass & Tubman, 2002; Strage & Brandt, 1999; Wintre & Yaffe, 2000). For example, Wintre & Yaffe (2000) and Pass & Tubman (2002) found that discussions with parents as well as psychological well-being variables, are related to adjustment to the university environment. Additional studies have investigated issues of personal and career identity development (Adams et al., 2000; Blustein et al., 1991; Lopez, 1989; Palladino-Schultheiss & Blustein, 1994a, 1994b; Perosa et al., 1996), social satisfaction (Kalsner & Pistole, 2003; Kenny & Donaldson, 1992; Langhinrichsen-Rohling et al., 1997; Lapsley & Edgerton, 2002; Rodriguez & Bernstein, 1995), and emotional coping with college students (Haemmerlie et al., 1994; Hoffman & Weiss, 1987; Holmbeck & Wandrei, 1993; Kenny & Perez, 1996; Lopez et al., 1989; McCarthy

et al., 2001). Adams et al. (2006) found the best predictors of baseline professional identity among health and social care students were: gender, profession, previous work experience in the field, understanding of team working, knowledge of the profession, and cognitive flexibility. Kalsner and Pistole (2003) found that female college students scored higher than male students on measures of attachment to parents, and other studies have shown women report seeking more social support in the face of stress, particularly emotional support, than men do.

The process of college adjustment is multidimensional and complex (Stoklosa, 2015). The studies of college adjustment utilize various definitions regarding the meaning of adjustment. Credé and Nichorster (2012) emphasized an important distinction within the literature between adjustment to college, which they defined as “the degree to which students are able to quickly and effectively adapt to various challenges encountered in a new environment” (p. 134), and the adjustment of college students, which referred to students’ personal characteristics that existed as separate from the process of transition to college and commonly were in existence prior to college entry. Those may include emotional and behavioral strengths and difficulties, such as coping strategies, self-esteem, and mental health, among others. Despite various interests within the literature, consensus exists, recognizing the fact that the process of college adjustment is multidimensional and complex (Stoklosa, 2015). Some studies have chosen to focus on academic and GPA outcomes (Cutrona et al., 1994; Fass & Tubman, 2002; Strage & Brandt, 1999; Wintre & Yaffe, 2000). Fayed and Gasem (2012) investigated the relationship between the “adjustment with university life” factors and the probability of student dropout. The study was conducted on the male campus of Imam Muhammad Ibn Saud Islamic University in Riyadh, Saudi Arabia. The study population was the undergraduate students from all colleges and study majors of the male campus. The study sought any significant differences between the “adjustments with university

life” factors and the probability of student dropout and tested the predictability of a scale to identify the students who are at risk of dropping out.

The ability to adapt and adjust to the changes and challenges that college brings is important for students. The transition to college can pose many challenges and difficulties throughout the adjustment process (Dixon, Rayley, & Chung, 2007; Lamborn & Grosh, 2009). Students experience many adjustments, including the loss of familiarity and embarking on new territories and struggles in their lives. The transition process involves many adjustments and necessitates life-altering decision making, including being away from family, depression, isolation, increasing independence, establishing new social networks, and coping with different levels of academic stress (Arnett, 2000; Skowron, Wester, & Azen, 2004). Skowron et al. (2004) confirmed a link between autonomy and adjustment among college students. However, the adjustment appears to be most problematic during early college experiences, which may be most important due to the highest dropout rates occurring during the first two years in college (Skowron et al., 2004). Successful adjustment is important in promoting a satisfying college experience, which can lead to increased persistence and graduation rates (Gerdes & Mallinckrodt, 1994). By determining the factors that influence college student adjustment, it might be possible to design interventions that would help alleviate adjustment barriers and make it possible for students to improve their level of satisfaction and success.

One measure of college student adjustment is the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999). This 67-item measure of a student’s ability to adapt and cope with the demands of college consists of four subscales: Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment, and Goal Commitment/Institutional Attachment. The Inventory of New College Student Adjustment (INCA; Watson & Lenz, 2018) was developed to assess the adjustment difficulties experienced by first-year college students. The INCA was

preferred by the researcher in this study due to it being a recently developed, psychometrically sound, brief (14 item) measure of student adjustment. Other measures are lengthy and require additional time to administer. The INCA provides researchers with a brief, theory-driven instrument to use in assessing the constructs (Belief in Self and Supportive Network) associated with adaptive college student adjustment. Unlike the SACQ, the INCA addresses the most salient issues related to the adjustment experiences of contemporary college students (Watson & Lenz, 2018).

CHAPTER III: RESEARCH DESIGN & METHODOLOGY

The purpose of this study was to investigate the relationship among three factors potentially contributing to perceived academic performance and college student adjustment of undergraduate students, juniors and seniors, enrolled in a Hispanic-serving institution. The researcher examined how achievement motivation, resilience, and relational skills predicted academic achievement as defined by grade point average. Additionally, the relationships among the three factors were examined. Finally, the researcher investigated differences in the confluence of these factors by gender and ethnicity.

Research Questions

The following research questions were investigated in this study.

1. What are the levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students?
2. What is the relationship among undergraduate students' resilience, achievement motivation, and relational skills, perceived academic performance, and adjustment to college?
3. Is there a difference in college adjustment and perceived academic performance of undergraduate college students based on gender?
4. To what extent can the variance in college student adjustment be accounted for by resilience, achievement motivation, and relational skills?
5. To what extent can the variance in college students' perceived academic performance be accounted for by resilience, achievement motivation, and relational skills?

Research Design

The quantitative study employed an exploratory non-experimental, correlational design. A correlation analysis was used to examine the nature and strength of the relationship between independent variables and the dependent variable (Cohen, Cohen, West, & Aiken, 2003). Correlation analysis is utilized to determine the predictive power of the independent variables on the dependent variable (Cohen et al., 2003). Specifically, the study was predictive in which three factors—achievement motivation, resilience, and relational skills—were used to explain variation in perceived academic performance and college student adjustment of undergraduate, third- and fourth-year college students. Quantitative data were collected and analyzed to answer the research questions and gain insight into variables contributing to student success.

Participant Selection

The population for this study was undergraduate college students, juniors and seniors, enrolled at a regional public four-year university in South Texas. Minimum age of the participants was 18 years. Participants were recruited from business classes. The sample was one of convenience with instructors willing to seek volunteer participation from students. The sample size was based on an a priori power analysis using G*Power 3.0.10 to calculate the minimum sample size needed to evaluate the research questions of this study (Faul, Erdfelder, Buchner, & Lang, 2009). Using a minimum power of .80, considered a suitable level of power by Cohen (2013), and assuming a medium effect size as $f^2 = .15$, and a .05 alpha level, the estimated target sample size for the study was reported to be 154. The actual sample size of 308 was an adequate sample size for sufficient power in a multiple regression analysis (Heppner, Wampold, & Kivlighan, 2008).

Data Collection Procedure

After Institutional Review Board (IRB) approval, data were collected; the aim was to recruit undergraduate participants from different colleges and departments. A solicitation email

was sent to professors in different undergraduate departments across the university. The email included a brief explanation and purpose of the study. The researcher scheduled class visitations with professors who are willing to give thirty minutes of the class time to recruit volunteer research participants.

The researcher attended the first or last thirty minutes of scheduled classes to collect data. The researcher explained that the purpose of this study was to examine the relationship of three constructs (achievement motivation, resilience, and relational skills) to perceived academic performance and adjustment of undergraduate students. The age criterion to participate was 18 years old or older. Participants were told their participation was voluntary and that their responses would remain anonymous. A survey package including an information letter, demographic form, and instrumentation measuring the study constructs (Brief Resilience Scale, Achievement Motivation Measure, Relational Skills Inventory, and the Inventory of New College Student Adjustment) was provided to volunteer participants. Before taking the survey, participants were asked to read an information letter. They were informed that the survey would take between 30 minutes to complete.

Methodology

Instrumentation

This study used a quantitative design to investigate factors predictive of academic achievement and adjustment to a college of undergraduate students. Undergraduate college students choosing to participate completed a brief demographic questionnaire and four instruments. Demographic and situational information included the following: age, gender, ethnicity, student status, academic load, living situation, work situation, and performance rating. The performance rating was a self-rating of their overall performance in college, a self-estimation of their high-school grade point average, and a self-report of their grade point average at midterm

in college. Factors predicting adjustment and academic achievement included the Brief Resilience Scale (Smith et al., 2008), Achievement Motivation Measure (Smith, 2015; Smith et al., 2019), and the Relational Skills Inventory (R.L.Smith, personal communication, May 1, 2019). The Inventory of New College Student Adjustment INCA (Watson & Lenz, 2018) measured college adjustment.

Demographic questionnaire

A demographic form was designed to collect data related to participants' age, gender, and ethnicity. Also, student status, academic load, living situation, work situation, and performance rating was obtained. Demographic variables were chosen so the researcher would have information available to compare group difference, such as differences in gender.

Measures

The Brief Resilience Scale. The Brief Resilience Scale (Smith et al., 2008) was created to assess resilience as the ability of an individual to recover from stress and is a 6-item scale consisting of three positively worded items and three negatively worded items. The items are responded to on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A total score for resilience is calculated by dividing the total score by the number of items on the scale (six). Scores can range from six to thirty, with higher scores indicating greater resilience. Smith et al. (2008) reported good internal consistency for the Brief Resilience Scale. Based on scores across four different samples, the Cronbach's alpha reliability coefficient ranged from .80 to .91 (Smith et al., 2008). The test-retest reliability was moderate with a 1-month test-retest reliability coefficient of .69 and a 3-month test-retest reliability coefficient of .62. Smith et al. (2008) assessed the convergent validity of the Brief Resilience Scale by examining correlations between the Brief Resilience Scale and other instruments. Smith et al. (2008) found positive correlations between the Brief Resilience Scale and measures of resilience, active coping, positive reframing, optimism, purpose in life, and social support. Further assessment of convergent validity revealed negative

correlations between the Brief Resilience Scale and measures of pessimism, perceived stress, behavioral disengagement, depression, negative effect, self-blame, denial, negative interactions, alexithymia, negative interactions, and physical symptoms (Smith et al., 2008).

The Achievement Motivation Measure. The Achievement Motivation Measure (AMM) (Smith, 2015; Smith et al., 2019) measures achievement thinking and achievement behavior. Achievement thoughts and behaviors identified by Atkinson and McClelland provide the conceptual framework of the AMM. Cognitions, measured by the AMM as related to achievement thoughts, include Need, Hope of Success, and Fear of Failure. Additional achievement thoughts include Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help (McClelland et al., 1953). The first set of items on the 14-item survey measures overall achievement motivation in terms of thinking and action and is answered using a 5-point scale ranging from 1 (*never*) to 5 (*always*). The 14-item AMM included nine items for the *Achievement Thoughts* subscale and five items for the *Achievement Behaviors* subscale.

Higher scores reflect a high level of achievement motivation, and lower scores reflect a low level of achievement motivation. In order to evaluate the instrument, researchers (Smith et al., 2019) conducted two different analyses using different data sets. The sample included three hundred and twenty-nine participants, all college students mean age 21.26 years and 39.4% of the sample reported their academic level as upperclassman (junior or senior). Based on the sample scores, the Cronbach's alpha reliability coefficient was calculated at .84 (Smith et al., 2019).

An Exploratory Factor Analysis (EFA) using principal axis factoring was conducted on the first data set, including 303 students enrolled in graduate and undergraduate courses in a university setting. An oblique rotation method examined the relationship between the components of achievement motivation (Tabachnick & Fidell, 2013). Results of the EFA showed that the AMM retained 14 items under two factors, accounting for approximately 54% of the variance in the

model. A Confirmatory Factor Analysis (CFA) was used to evaluate the model in the second analysis. The CFA has been shown to be an appropriate follow-up analytical approach to establish the factor structure of a scale (Bartholomew, Scheel, & Cole, 2015). The CFA was conducted using a new data set that included 329 participants from the study. The CFA indicated a mediocre fit (Dimitrov, 2014). Based on the modification indices, two modifications were made. Modification indices (MIs) suggested adding an error covariance between item 11 and item 14 to improve the model. These items measured similar concepts (both emphasized the importance of feedback for an individual). The results indicated that the modified model improved dramatically, $\chi^2 (75) = 198.481, p < .001$; GFI= .92, TLI= .85, CFI= .88, SRMR= .059, and RMSEA= .071 [90% CI= .059- .083]. Although, the second model had better values than the first model, the indices suggested a poor model fit (Smith et al., 2019). Additionally, MIs suggested adding an error covariance between items 2 and 4 to improve the model. The researchers removed item 2 from the model and ran another analysis. The results indicated that the modified model improved greatly, $\chi^2 (63) = 158.91, p < .001$; GFI= .93, TLI= .88, CFI= .91, SRMR= .058, and RMSEA= .068 [90% CI= .055- .081]. After the second modification, the researchers reviewed MIs for a better model fit and found no additional modification suggestions for significant improvements in the model (Smith et al., 2019).

The Relational Skills Inventory. The Relational Skills Inventory measures interactive relationship skills of individuals using four factors: relational attributes (general attributes of individuals as they engage in interpersonal relationships), core communication skills (essential conditions for effective communication based upon the Law of Interpersonal Relationships, (Rogers, 1959), trust (based upon inferred trust in the context of one to one and group relationships), and creating a safe environment (based on social cognitive theory of creating a safe psychosocial environment). It is a measure of how students communicate and respond to others,

including other students and professors. The 32 items are answered using a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*), (R. L. Smith, personal communication, May 1, 2019). The RSI, developed through a comprehensive literature search, has content validity. Items were created based upon the theoretical concepts of relational leadership presented by Uhl-Bien (2006). The RSI initially consisted of 54 items. A content review of the RSI was performed, and items marked essential by 80% or more of the reviewers were included. This resulted in the final number of items being narrowed 32 items using analytic procedures (Lawshe, 1975; Wilson, 2012).

The Inventory of New College Student Adjustment. The Inventory of New College Student Adjustment (INCA) (Watson & Lenz, 2018) was developed to assess the adjustment difficulties experienced by first-year college students. In its development, the INCA began with 83 items. An Exploratory Factor Analysis (EFA) was conducted utilizing the principal axis factoring (PAF) extraction method on the INCA survey data obtained from a random sample of 324 students drawn from the researchers' original participant pool of 474 (Watson & Lenz, 2018). This analysis resulted in the emergence of a two-factor solution: Supportive Network and Belief in Self. Principal axis factoring approach was selected because it does not carry the assumption of multivariate normality (Pituch & Stevens, 2016) and allows factors to correlate (Costello & Osborne, 2005). A promax rotation was performed due to the researchers' expectation that correlations would exist among factors, and oblique rotations often provide a useful starting point when conducting EFAs (Dimitrov, 2014). After pairing error terms, a good model fit was found for both INCA subscales (Watson & Lenz, 2018). Alpha coefficients of .83 and .77 for the Supportive Network and Belief in Self subscales, respectively, exceeded standard conventions. The PAF procedure was used to extract factors from the data. Using the retention criteria described earlier, data supported a two-factor structure explaining 47.17% of the variance for the entire set of variables. Because each factor had at least three items loading at .5 or greater, both were

considered stable factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Factor 1 was labeled *supportive network*, as the items loading on this scale, each described relationships with peers and family. Factor 2 was labeled *belief in self* (Watson and Lenz, 2018). The final version of the INCA is a 14-item instrument using a 4-point Likert scale to assess participant responses from 1 (*strongly disagree*) to 4 (*strongly agree*). The 6-item Supportive Network subscale includes items such as “My friends support me as I work toward my goals,” and “My family’s support makes me feel stronger.” The 8-item Belief in Self subscale includes items such as “My study habits are effective,” and “I know what I will do after graduation” (Pester et al., 2018).

Data Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS, 26.0). Scores on three instruments measured the predictor variables for this study—resilience, achievement motivation, and relational skills. The data were screened for clerical errors of entry and missing data and was also checked for outliers, normality, linearity, and homoscedasticity. All scores were within the appropriate range between the minimum and maximum score of each scale. Also, data were evaluated for coding errors and missing or invalid values. The researcher examined the entire data set for missing data and found two variables with missing values. One participant did not report a score for an item on the Relational Skills Inventory, and another did not report an item on the Achievement Motivation Scale. These two values were MCAR. The researcher addressed these missing values by inputting values using the series mean replacement method.

To meet the needs of this study, univariate, bivariate, and multivariate analyses were utilized. Frequencies, descriptive statistics, independent t-tests, a Pearson correlation, and regression analysis was employed to evaluate relationships between the independent and dependent variables. The goal was to determine the combined predictive ability of resilience,

achievement motivation, and relational skills for predicting academic performance as measured by estimated self-rating among undergraduate college students and adjustment to college as measured by the INCA. Descriptive statistics provided information on the sample of the study. Additionally, SPSS was used to conduct simultaneous multiple regression analyses (MR), a correlational procedure used to examine the nature and strength of the relationships between predictor variables and a criterion variable (Urda, 2010).

Research question 1. What are the levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students?

To address the first research question, the overall levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students were examined. Means, standard deviations, and score ranges, were computed for all scales.

Research question 2. What is the relationship among undergraduate students' resilience, achievement motivation, and relational skills, perceived academic performance, and adjustment to college?

A series of Pearson product-moment correlations were computed to assess the relationships among the three variables included in this study (resilience, achievement motivation, and relational skills). The Pearson product-moment correlation coefficient (or Pearson correlation coefficient, for short) is a measure of the strength of a linear association between two variables (Lund Research, 2018).

Research question 3. Is there a difference in college adjustment and perceived academic performance of undergraduate college students based on gender?

Independent-samples t-tests were conducted to examine differences in college student adjustment and the perceived academic performance of undergraduate college students based on gender.

Research question 4. To what extent can the variance in college students' adjustment be accounted for by resilience, achievement motivation, and relational skills?

Research question 5. To what extent can the variance in college students' perceived academic performance be accounted for by resilience, achievement motivation, and relational skills?

To address questions four and five, multiple regression analyses were computed to assess whether there is a statistically significant difference in the percentage of variance explained in the criterion variables, college adjustment and perceived academic performance, by the predictor variables resilience, achievement motivation, and relational skills.

Chapter Summary

The purpose of this study was to investigate the relationship among three factors potentially contributing to perceived academic performance and college student adjustment of undergraduate students, juniors and seniors, enrolled in a Hispanic-serving institution. Specifically, the study was predictive in which three factors—achievement motivation, resilience, and relational skills—were used to explain variation in academic achievement and college student adjustment of undergraduate college students. Quantitative data were collected and analyzed to answer the research questions and gain insight into variables contributing to student success. Frequencies, descriptive statistics, independent t-tests, a series of zero-ordered correlation coefficients, and regression analyses were employed to evaluate relationships between the independent and dependent variables. The goal was to determine the best combination of studied variables—resilience, achievement motivation, and relational skills—for predicting academic performance as

measured by estimated college performance self-rating among undergraduate college students and adjustment to college as measured by the INCA.

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PREFACE TO SUMMARY MANUSCRIPT

Changes to the Project

The following changes were made to the project, from proposal to defense:

- “Achievement” vs “Performance” *consistency in verbiage*. The study utilizes academic performance as a criterion variable as measured by participant self-rating, as opposed to academic achievement, which would typically be measured by grade point average.
- Research Questions reduced from seven to five. The following research question was removed from the study: Is there a difference in college adjustment and academic performance of undergraduate college students based on ethnicity? This research question was eliminated due to lack of variance regarding ethnicity. As is reported in demographics, most of the participants identified as Hispanic/Latino or White/Non-Hispanic. If this study had been conducted in a setting with greater ethnic diversity, this research question might have been chosen for investigation. Additionally, the following research questions (a, b) were combined to form one question (c):
 - a) What is the relationship among undergraduate students’ resilience, achievement motivation, and relational skills and perceived academic performance?
 - b) What is the relationship among undergraduate students’ resilience, achievement motivation, and relational skills and adjustment to college?
 - c) What is the relationship among undergraduate students’ resilience, achievement motivation, and relational skills, perceived academic performance, and adjustment to college?
- Proposed statistical analyses were amended: removed MANOVA, added frequency, independent t-test, and better described multiple regression (simultaneous). MANOVA procedure was deemed inappropriate for this study as it is used to determine differences

between groups, e.g. undergraduate and graduate students. Independent t tests are used to determine statistically significant differences between groups, e.g. men and women.

- Updated citations in various areas throughout the document.
- Sample size (originally reported to be $n=171$ increased to full sample size of $n=308$).
- Detailed information on instrument psychometrics was added.

Identification of the Target Journal

A manuscript describing the current study will be submitted for editorial review to the *Journal of College Student Retention: Research, Theory & Practice (JCSR)*. The *JCSR* provides the educational community, federal and state governmental officials, and the general public a medium to exhibit and explore the complex issue of student retention and attrition. *JCSR* features articles about current and new theoretical constructs and current research on student retention and attrition in higher education. Also, the *JCSR* provides practitioners a forum to highlight and disseminate to the educational community, current practices, programs, and services, which help students persist through academic and personal goal completion. The journal aims to provide the educational community, federal and state government officials, and the public with the latest findings regarding the retention of students in higher education. Although access to higher education is virtually universally available, many students who start in a higher education program drop out before completing a degree or achieving their individual academic and/or social goals. Resilience, achievement motivation, and relational skills are factors that have not been examined collectively as predictors of academic performance and adjustment to college among junior and senior college students. If we understand more about the factors associated with college success, particularly that of upperclassmen, we may be able to revise attrition trends in a way that best supports student achievement. This manuscript is a good fit for the *JCSR* due to its content directly

relating to college student performance and adjustment, and its implications related to college student retention.

According to the *JCSR*, the submission must represent an original work that has not been published elsewhere nor submitted to another journal for publication. Submission guidelines mandate that all identifying information must be removed from each document and file name. Additionally, submissions should be prepared according to the Publication Manual of the American Psychological Association (APA), Sixth Edition, including title page (without author names), abstract, keywords, in-text citations, pagination, headings, tables, figures, and reference lists. The *JCSR* does indicate that there are fees associated with printing color images.

Committee Commentary and Student Feedback

All committee members attended my dissertation defense hearing. At the end of the meeting, committee members provided suggestions regarding various aspects of the project write-up and manuscript. The chart below documents suggested feedback as well as my response to each section.

Dissertation Defense Hearing Comments and Responses

Comments from Committee Members	Responses
1) Address formatting errors, APA format, margins, headings, font style, etc. [Nelson, Quick, Ricard, Smith, Watson]	Addressed spacing, margins, font, etc. and attended GROW Dissertation Formatting Workshop. Also hired an editor to review APA and dissertation format before submission.
2) Explain, in a sentence or two, why these demographic variables were selected. [Nelson]	I explained that these variables were selected to have this information readily available to compare group differences (which I later elected only to compare gender based on lack of variance re ethnicity and age intervals).
3) Expand upon the discussion, which includes implications, limitations, and further research. [Nelson, Smith]	Elaborated on implications, limitations, further research sections, as well as a few key studies to cite in the discussion of results.

4) Explain what the results mean. (e.g., How does this compare to the literature?) [Nelson, Quick, Ricard]	Expanded on results and discussion sections. As a reminder, the actual manuscript was not available at the time of oral defense. A brief write-up of results and a brief discussion were provided to the committee, as a guide to accompany my oral presentation of findings.
5) For the implications section, be specific, consider your audience, and narrow your outlook. [Nelson, Watson, Smith]	Adjusted implications section and removed the focus on counselor educators.
6) Add contemporary citations to the literature reviewed, particularly related to resilience and college student adjustment. [Ricard, Watson]	I included additional literature on college student adjustment and resilience and included in the literature review section of the manuscript.
7) Connect the findings from your results with existing literature. [Nelson, Ricard]	I addressed this information in the discussion section of the manuscript. As a reminder, the actual manuscript was not available at the time of oral defense. A brief write-up of results and a brief discussion were provided to the committee, as a guide to accompany my oral presentation of findings.
8) In your implications section, make a stronger connection to how the results of your dissertation impact the practice of	Using feedback provided by the committee, I addressed this in the discussion section of the manuscript.

counselors and/or counselor educators. Nelson, Ricard, Watson, Smith]	
9) Use “perceived performance” terminology throughout the document; key definitions need to be tailored to the population and explained in the researcher’s words. [Watson]	Updated perceived performance term throughout the document. Noted definitions of constructs.
10) You addressed cleaning the data, but it is not mentioned, or I could not find it in the write-up. [Nelson]	I documented in the Analysis section of the manuscript exactly how I addressed missing/discrepant data (series mean replacement method).
11) The first draft of the manuscript submitted 6/21 requires editing on content and style per sample article. As chair and methodologist, respectively, this was sent to Drs. Watson and Smith for initial review on content. [Watson, Smith]	Addressed these concerns via updated results & discussion sections, elaborated implications section, reorganized document to reflect that of a manuscript and not an abbreviated dissertation. Fully described constructs using structure recommended by Dr. Watson. Reduced intro section of the manuscript before getting into <i>The Current Study</i> section. Reduced excess/irrelevant instrument information. Reformatted tables to single-spaced items.

12) In-text citations listed by year, rather than alphabetical order (see APA format). [Nelson, Ricard]	Citations within text now read in alpha order, as opposed to chronological order.
13) Second round edits on manuscript (suggested changes by Drs. Smith and Watson) 7/4 and 7/6.	These changes include detailed reliability/validity information on measures, key areas with updated citations, eliminated minor formatting errors, updated definitions, and the formation of a conclusion to the manuscript.

CHAPTER IV: MANUSCRIPT

RESILIENCE, ACHIEVEMENT MOTIVATION, AND RELATIONAL SKILLS AS PREDICTORS OF ACADEMIC PERFORMANCE AND COLLEGE ADJUSTMENT IN UNDERGRADUATE UNIVERSITY STUDENTS

Abstract

Predictors of upperclassmen undergraduate students perceived academic performance and adjustment to college were examined using four instruments. The research sample was comprised of 308 students from South Texas and findings indicate that correlations between predictor variables and the criterion variable student perceived academic performance produced statistically significant positive correlations, *except* between achievement motivation and performance rating. The most significant positive correlations among predictor variables and the criterion variable college student adjustment were between relational skills and achievement motivation and between relational skills and college student adjustment. Of the three predictors, at 5.7%, resilience uniquely accounted for the most variance in college student adjustment. Resilience significantly predicted performance rating, and uniquely accounted for 5% of the variance in the model. The researchers provided implications for educators, college counselors, and college administrators, as well as provided directions for future research.

Keywords: upperclassmen undergraduate students, resilience, achievement motivation, relational skills, perceived academic performance, college adjustment

The pursuit of an undergraduate education serves as a transition from adolescence to adulthood and entry into the workforce. According to the National Center for Educational Statistics, undergraduate enrollment is projected to increase by three percent (from 16.9 million to 17.4 million students) between 2016 and 2027 (NCES, 2018). An issue of concern is the retention among college students who are planning to spend at least four years in college and complete a bachelor's degree. Retention over this period is significant to students, parents, instructors, and university administrators. It is important to go beyond acknowledging that student enrollment is increasing year to year and investigate whether the same students are returning year to year, and, ultimately, whether these students will remain enrolled long enough to complete their degree. Therefore, undergraduate student attrition continues to be a major issue in higher education (Azarcon, Gallardo, Anarcin, & Velasco, 2014). It is important that researchers investigate factors that relate to the success and adjustment of college students as they matriculate through a four-year degree program (Pugachov, Maxwell, Youmans, & Wahnschaff, 2015). This study focuses exclusively on upperclassmen undergraduate students: juniors and seniors.

While academic success may come easily for some students, many continue to struggle with the rigorous task of adjusting to life as college students, constantly juggling assignments, meeting expectations, and experiencing a changing lifestyle. Monroe (2009) revealed that academic demands increase and new social relations are established throughout one's college experience. Although undergraduate attrition is emphasized among first-year students, second-year and third-year students, and even seniors drop out of college. College students report feeling overwhelmed by constant academic and social demands; 87% of all student participants said they felt overwhelmed by all they had to do at least once in the previous year, according to the American College Health Association (2017). College students throughout their academic career are considered at-risk for academic difficulties (Wintre, Bowers, Gordner, & Lange, 2006) and

ultimately dropping out of school (Credé & Neihorster, 2012; Haktanir et al., 2018). For the first time, full-time degree-seeking students who enrolled at four-year degree-granting institutions in the fall of 2015, the retention rate (i.e., the percentage of students returning the following fall) was 81% (NCES 2018). The six-year graduation rate (150 percent graduation rate) for first-time, full-time undergraduate students who began seeking a bachelor's degree at a four-year degree-granting public institution in fall 2010 was 60% (NCES 2018). A number of the students who did not graduate within six years were classified as upperclassmen, or had either dropped out or stopped out from enrollment. University attrition rates have increased from 12.5% in 2009 to 14.8% in 2014 (Moodie, 2015). The research studies on student attrition have employed traditional academic factors such as high-school grade point average (Atkinson & Geiser, 2009; Cherastidtham, Norton, & Mackey, 2018; Tinto, 1993), first-quarter grade point average (DeWitz, Woolsey, & Walsh, 2009), and admissions test scores (Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008) as strong predictors of academic performance as measured by students' college grade point average.

Findings indicate that students who do not adjust well to college, particularly in the dimension of resilience and relational skills, are more likely to leave school before graduation (Glass, Wongtrirat, & Buus, 2015; Kenzie, 2013). Much of the research within the subject of student attrition is focused solely on first-year student attrition, rather than that of upperclassmen undergraduates (Beer & Lawson, 2018; Griswold, 2014). Given the substantial impact of timely degree attainment on the students, their families, institutions, and society, it is necessary to go beyond retention rates of freshmen and acknowledge that attrition of students, particularly the return rate at the junior and senior level, is equally significant and deserves unique attention so that overall retention rates might be improved. Mabel and Britton (2018) estimate that 14 % of all entrants to college and one-third of all dropouts completed at least three-quarters of the credits that are typically required to graduate before leaving without a degree. Their results also indicate that

the probability of departure spikes as students near the finish line. Understanding some of the variables that predict student perceived performance or adjustment may allow educators and college personnel to help foster student success and thereby reduce attrition, particularly for those upperclassmen undergraduate students who are closer to attaining their degree.

Resilience has been defined as an individual's capacity to overcome adversity and successfully adapt to their environment (Pidgeon et al., 2014; Wang, 2009). Despite ongoing debate on the conceptualization of resilience and the variety of approaches that are used to study this construct (Govender, Cowden, Asante, George, & Reardon, 2017), resilience is typically viewed as the successful adaptation to adverse life circumstances (Rathore, 2017). The term *resilience* has been defined as the ability to spring back from challenging life experience and heal from stress (Smith et al., 2008). Resilience is a key variable associated with adaptation to the university environment (Wang, 2009). In the absence of resilience, the stressors university students face have greater potential to negatively affect their mental health, increase psychological distress, and result in adjustment problems (Pittman & Richmond, 2008; Wintre & Yaffe, 2000). Despite the role of motivation to achieve, studies have not adequately focused on this factor as related to performance and adjustment to college (Rosenzweig & Wigfield, 2016; Schunk, Pintrick, & Meece, 2008). Definitions of resilience have ranged from a set of traits, an outcome, or a dynamic process that involves the exposure to stress or adversity, followed by successful adaptation (Pan, 2011; Pan, Fu Keung Wong, & Ye 2013). Overall, global findings suggest that resilience in the university environment is positively associated with greater mental health, as well as successful transition and adjustment to university life (Peng et al., 2012; Wilks & Spivey, 2010). Increased research on and policy regarding resilience has the potential to inform college-counseling practice better (Hartley, 2012). There is a growing demand for psychological services providers in college counseling centers (Benton, Robertson, Tseng, Newton, & Benton, 2003) to address the increasing

numbers of students entering college with psychological difficulties (Beamish, 2005; Smith et al., 2007). According to Steinhardt and Dolbier (2008), “resilience is an asset-based approach that can assist college counselors to support college students’ mental health needs and promote academic persistence” (p. 445). In the college student population, Masten (2001) asserts “resilience is based on the belief that all college students can achieve college success by using *protective factors*, defined as the qualities of persons or contexts that predict positive outcomes under high-risk conditions” (Hartley, 2012, p. 38).

Achievement motivation is defined as “the need to perform well or the striving for success, evidenced by persistence and effort in the face of difficulties” (McClelland, 1961, p. 36). Findings by McClelland and others led to a theory of achievement motivation identifying cognitions and behavior patterns common among high achievers (Smith, Karaman, Balkin, & Arora, 2019). Findings targeted a prototype of the high-achieving individual as one who utilizes a set of thoughts and behavior strategies when embarking upon a task or assignment. The ten thoughts of high achievers, updated to current society (Smith, 2015), are Achievement Imagery, Need, Action, Hope of Success, Fear of Failure, Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help.

Relational Skills refers to the attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). Relational Leadership Theory (RLT) emphasizes an entity perspective that focuses on identifying attributes of individuals as they engage in interpersonal relationships (Uhl-Bien, 2006). The term relational is used to describe a view of leadership and organization as human social constructions that emanate from the rich connections and interdependencies of organizations and their members (Bradbury & Lichtenstein, 2000; Uhl-Bien, 2006). Relational attributes have been studied as they relate to leadership, the hierarchical structure

within organizations, and business and government. However, there is not sufficient existing research involving relational attributes or skills and student success or retention.

Rogers (1942) described the therapeutic relationship as one that “represents a quality of social bond which differs from any the client has heretofore experienced,” and said that the relationship could further be described as being different from most ordinary life relationships (p. 87). Cashdan (1982) states, “The therapist-client *relationship* can be viewed as the primary arena for meaningful psychotherapeutic change” (p. 215). Relational Leadership Theory is the study of both *relationships* (interpersonal relationships as outcomes of or as contexts for interactions) and *relational dynamics* (social interactions, social constructions) of leadership. The focus of Relational Leadership Theory research is a better understanding of the relational dynamics—the social processes—that comprise leadership and organizing. Relational Leadership Theory sees leadership as the process by which social systems change through the structuring of roles and relationships (Fletcher, 2004; Seers, 2004; Senge & Kaeufer, 2001; Uhl-Bien, 2003, 2005, 2006). Valdez (2015) investigated the relationship between student-faculty interactions and student adjustment to college. The study found that compared to students’ background characteristics, students’ relationships with faculty members act as strong predictors of college adjustment. McFadden (2014) found that student-faculty interaction is positively associated with a wide range of student outcomes, such as students’ self-assessed leadership abilities and social self-confidence. Faculty members play an essential role in influencing student learning both in and out of the classroom (McMurtrie, 2011). Uhl-Bien, Graen, & Scandura (2000) describe the relationship development process as beginning with two individuals who engage in an interaction or exchange sequence (a series of interactions). The literature above supports the important role of faculty members in enhancing students’ adjustment and supporting their success.

One of the earliest definitions of college adjustment was proposed by Arkoff (1968) and referred to a student's interaction with his or her environment. This definition referenced students' academic achievement and personal growth as measures of adjustment. College students face several challenges, which include greater academic demands, greater independence, and less academic structure. The adjustment to college has been identified as an important outcome in its own, as well as an important predictor of educational outcomes. Through a review of the existing literature, Credé and Niehorster (2012) found that college adjustment is predictive of college academic performance and a very good predictor of college retention. The ability to adapt and adjust to the changes and challenges that college brings is important for all students. For the purposes of this study, college adjustment is defined as a multidimensional construct comprised of an individual's ability to cope with the demands of academic work and the social environment of university life, as well as his or her sense of well-being and overall attachment to the academic institution (Baker & Siryk, 1999; Ribbe, Cyrus, & Langan, 2016),

In previous research, many aspects of college adjustment have been explored, including family relationship dynamics. Some of the studies have focused on academic and GPA outcomes (Cutrona et al., 1994; Fass & Tubman, 2002; Strage & Brandt, 1999; Wintre & Yaffe, 2000). The studies of college adjustment utilize various foci regarding the meaning of adjustment. Credé and Niehorster (2012) emphasized an important distinction within the literature between adjustment to college, which they defined as "the degree to which students are able to quickly and effectively adapt to various challenges encountered in a new environment" (p. 134), and the adjustment of college students, which referred to students' personal characteristics that existed as separate from the process of transition to college and commonly were in existence prior to college entry. Those may include emotional and behavioral strengths and difficulties, such as coping strategies, self-esteem, and mental health, among others. Despite various interests within the literature, consensus

exists, recognizing the fact that the process of college adjustment is multidimensional and complex (Stoklosa, 2015). Some studies have chosen to focus on academic and GPA outcomes (Fass & Tubman, 2002; Wintre & Yaffe, 2000). Fayed and Gasem (2012) investigated the relationship between the “adjustment with university life” factors and the probability of student dropout. The study sought any significant differences between the “adjustments with university life” factors and the probability of student dropout and tested the predictability of a scale to identify the students who are at risk of dropping out.

The ability to adapt and adjust to the changes and challenges that college brings is important for all students. The transition to college can pose many challenges and difficulties throughout the adjustment process. Students experience many adjustments, including the loss of familiarity and embarking on new territories and struggles in their lives. The transition process involves many adjustments and necessitates life-altering decision making, including being away from family, depression, isolation, increasing independence, establishing new social networks, and coping with different levels of academic stress (Arnett, 2000; Dixon, Rayley, & Chung, 2007; Lamborn & Grosh, 2009; Skowron, Wester, & Azen, 2004). By determining the factors that influence college student adjustment, it may be possible to design interventions that would help alleviate adjustment barriers and make it possible for students to improve their level of satisfaction and success.

The Current Study

The purpose of this study was to investigate the relationship of three constructs—resilience, achievement motivation, and relational skills—to the perceived academic performance and adjustment to college of junior and senior college students.

Research Question 1

What are the levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students?

To address the first research question, the overall levels of resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance among undergraduate students were examined. Means, standard deviations, and score ranges were computed for all scales.

Research Question 2

What is the relationship among undergraduate students' resilience, achievement motivation, and relational skills, perceived academic performance, and adjustment to college?

A series of Pearson product-moment correlations were computed to assess the relationships among the three variables included in this study (resilience, achievement motivation, and relational skills). The Pearson product-moment correlation coefficient (or Pearson correlation coefficient, for short) is a measure of the strength of a linear association between two variables (Lund Research, 2018).

Research Question 3

Is there a difference in college adjustment and perceived academic performance of undergraduate college students based on gender?

Independent-samples t-tests were conducted to examine differences in college student adjustment and the perceived academic performance of undergraduate college students based on gender.

Research Question 4

To what extent can the variance in college students' adjustment be accounted for by resilience, achievement motivation, and relational skills?

Research Question 5

To what extent can the variance in college students' perceived academic performance be accounted for by resilience, achievement motivation, and relational skills?

To address questions four and five, simultaneous entry multiple regression analyses were computed to assess whether there is a statistically significant difference in the percentage of variance explained in the criterion variables (college adjustment and perceived academic performance) by the predictor variables (resilience, achievement motivation, and relational skills) between the models run.

Methods

This quantitative study employed an exploratory non-experimental, correlational design. A correlation analysis was used to examine the nature and strength of the relationship between independent variables and the dependent variable (Cohen, Cohen, West, & Aiken, 2003). Correlation analysis is utilized to determine the predictive power of the independent variables on the dependent variable (Cohen et al., 2003). Specifically, the study was predictive in which three factors—achievement motivation, resilience, and relational skills—were used to explain variation in perceived academic performance and college student adjustment of undergraduate third- and fourth-year college students. Quantitative data were collected and analyzed to answer the research questions and gain insight into variables contributing to student success.

Participants

Participants ($n = 308$) in this study were undergraduate college students, juniors and seniors, enrolled at a regional public four-year university in South Texas. Minimum age of the participants was 18 years. Participants were recruited from business classes. The sample was one of convenience with instructors willing to seek volunteer participation from students. A descriptive analysis was conducted for the demographic variables about gender, ethnicity, and age. The data

set consisted of 54.9% ($n = 169$) females and 44.8% ($n = 138$) male participants. Participants identified as 43.8% ($n = 135$) Caucasian, 43.5% ($n = 134$) Hispanic or Latino, and the remaining 12.5% ($n = 39$) African-American, Asian, Native American, Biracial, and Other. The age of the participants ranged from 18–50+ years old. The majority of participants were in the 18–23-year age category ($n=213$), 69.2% or the 24–30-year age category ($n=75$), 24.4%. Table 1 provides the basic characteristics of the study population.

Table 1

<i>Descriptive Statistics of the Study Population (n=308)</i>			
		<i>n</i>	Percent
Gender	Male	138	44.8%
	Female	169	54.9%
Ethnicity	North American	2	0.6%
	Asian American	9	2.9%
	African American	10	3.2%
	Biracial/ Other	18	5.8%
	Hispanic or Latino	134	43.5%
	White/ Non-Hispanic	135	43.8%
Age	18-23	213	69.2%
	24-30	75	24.4%
	31-40	15	4.9%
	41-50	3	1.0%
	50+	2	0.6%

Procedures

After Institutional Review Board (IRB) approval, data were collected. A solicitation email was sent to professors in different undergraduate departments across the university. The researcher scheduled class visitations with professors who were willing to dedicate a portion of the class time to recruit volunteer research participants. The researcher explained that the purpose of this study

was to examine the relationship of three constructs (achievement motivation, resilience, and relational skills) to perceived academic performance and adjustment of undergraduate students. The age criterion to participate was 18 years old or older. Although solicitation occurred among various colleges and departments across campus, volunteer participants all hailed from the college of business. A survey package including an information letter, demographic form, and instrumentation measuring the study constructs (Brief Resilience Scale, Achievement Motivation Measure, Relational Skills Inventory, and the Inventory of New College Student Adjustment) was provided to volunteer participants.

Measures

This study used a quantitative design to investigate factors predictive of academic achievement and adjustment to college of undergraduate students. Participants completed a brief demographic questionnaire and four instruments. Demographic information included age, gender, ethnicity, and performance rating. Demographic variables were chosen so the researcher would have information available to compare group differences. Variables predicting adjustment and perceived academic performance were measured using the Brief Resilience Scale, Achievement Motivation Measure, and the Relational Skills Inventory. The Inventory of New College Student Adjustment INCA measured college adjustment.

Perceived Performance. The performance rating was a self-rating of overall performance in college, a self-estimation of participants' high school grade point average, and a self-report of their grade point average at midterm in college. Criterion variable perceived academic performance was measured using the self-rating of overall performance in college, which ranged from *1 = Low* to *5 = Excellent*.

Resilience. The Brief Resilience Scale (Smith et al., 2008) was created to assess resilience as the ability of an individual to recover from stress and is a 6-item scale consisting of three

positively worded items and three negatively worded items. The items are responded to on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A total score for resilience is calculated by dividing the total score by the number of items on the scale (six). Scores can range from six to thirty, with higher scores indicating greater resilience. Smith et al. (2008) reported good internal consistency for the Brief Resilience Scale. Based on scores across four different samples, the Cronbach's alpha reliability coefficient ranged from .80 to .91 (Smith et al., 2008). Two of the four samples included college age participants, and approximately 59% of the entire sample was female, which is also reflective of the sample used in this study (55% female).

Achievement Motivation. The Achievement Motivation Measure (AMM) (Smith, 2015, Smith et al., 2019) measures achievement thinking and achievement behavior. Achievement thoughts and behaviors identified by Atkinson and McClelland provide the conceptual framework of the AMM. Cognitions, measured by the AMM as related to achievement thoughts include Need, Hope of Success, and Fear of Failure. Additional achievement thoughts include Success Feelings, Failure Feelings, World Obstacles, Personal Obstacles, and Help, (McClelland et al., 1953). The first set of items on the 14-item survey measures overall achievement motivation in terms of thinking and action and is answered using a 5-point Likert scale ranging from 1 (never) to 5 (always). The 14-item AMM included nine items for the Achievement Thoughts subscale and five items for the Achievement Behaviors subscale. Higher scores reflect a high level of achievement motivation and lower scores reflect a low level of achievement motivation. In order to evaluate the instrument, researchers (Smith et al., 2019) conducted two different analyses using different data sets. The sample included three hundred and twenty-nine participants, all college students mean age 21.26 years and 39.4% of the sample reported their academic level as upperclassman (junior or senior). Based on the sample scores, the Cronbach's alpha reliability coefficient was calculated at .84 (Smith et al., 2019). Approximately 65% of the sample identified as White or Caucasian or

Hispanic or Latino, which is also representative of the population demographics for the current study (with approximately 87% identifying as either Hispanic/Latino, or White/Non-Hispanic).

Relational Skills. The Relational Skills Inventory (RSI) measures interactive relationship skills of individuals using four factors: relational attributes (general attributes of individuals as they engage in interpersonal relationships), core communication skills (essential conditions for effective communication based upon the Law of Interpersonal Relationships) (Rogers, 1959), trust (based upon inferred trust in the context of one-to-one and group relationships), and creating a safe environment (based on social cognitive theory of creating a safe psychosocial environment). It is a measure of how students communicate and respond to others, including other students and professors. The 32 items are answered using a 5-point Likert scale ranging from 1 (never) to 5 (always.) The RSI, developed through a comprehensive literature search, has content validity (R. L. Smith, personal communication, May 1, 2019). Items were created based upon the theoretical concepts of relational leadership presented by Uhl-Bien (2006). The RSI initially consisted of 54 items. A content review of the RSI was performed, and items marked essential by 80% or more of the reviewers were included. This resulted in the final number of items being narrowed 32 items using analytic procedures (Lawshe, 1975; Wilson, 2012).

College Student Adjustment. The Inventory of New College Student Adjustment (INCA) (Watson & Lenz, 2018) was developed to assess the adjustment difficulties experienced by first-year college students. Upon development, the INCA began with 83 items. An Exploratory Factor Analysis (EFA) was conducted utilizing the principal axis factoring (PAF) extraction method on the INCA survey. This analysis resulted in the emergence of a two-factor solution: Supportive Network and Belief in Self (Watson & Lenz, 2018). Alpha coefficients of .83 and .77 for the Supportive Network and Belief in Self subscales, respectively, exceeded standard conventions. Factor 1 is labeled *supportive network* as the items loading on this scale each described

relationships with peers and family. Factor 2 is labeled *belief in self* (Watson and Lenz, 2018). The final version of the INCA is a 14-item instrument using a 4-point Likert scale to assess participant responses from 1 (strongly disagree) to 4 (strongly agree). The scoring range is from 14 to 56, with higher scores indicating higher levels of college adjustment, and lower scores indicating lower levels of college adjustment.

Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS, 26.0). Scores on three instruments measured the predictor variables for this study: resilience, achievement motivation, and relational skills. Criterion variables were measured using the self-rating for estimated college performance, as well as the instrument measuring college student adjustment (INCA). Before conducting analysis, the data were screened for clerical errors of entry, missing data, and accuracy, and were also checked for outliers, normality, linearity, and homoscedasticity. All scores were within the appropriate range between the minimum and maximum score of each scale. Also, data were evaluated for coding errors and missing or invalid values. The researcher examined the entire data set for missing data and found two variables with missing values. One participant did not report a score for an item on the Relational Skills Inventory, and another did not report an item on the Achievement Motivation Scale. These two values were missing completely at random (MCAR). The researcher addressed these missing values by inputting values using the series mean replacement method. To meet the needs of this study, univariate, bivariate, and multivariate analyses were utilized. Frequencies, descriptive statistics, independent t-tests, a Pearson correlation, and regression analysis was employed to evaluate relationships between the independent and dependent variables. The goal was to determine the combined predictive ability of resilience, achievement motivation, and relational skills for predicting academic performance as measured by estimated self-rating among

undergraduate college students and adjustment to college as measured by the INCA. Descriptive statistics provided information on the sample of the study. Additionally, SPSS was used to conduct simultaneous multiple regression analyses (MR), a correlational procedure used to examine the nature and strength of the relationships between predictor variables and a criterion variable (Urdan, 2010).

Results

Research Question 1

Three instruments were used to measure the predictor variables, the Brief Resilience Scale, the Achievement Motivation Measure, and the Relational Skills Inventory. The Inventory of New College Student Adjustment (INCA) measured the criterion variable college student adjustment. A descriptive analysis was conducted for the predictor variables and criterion variables of the study. Descriptive statistics are presented in Table 2.

The resilience score on the Brief Resilience Scale represents the ability to bounce back or recover from difficult or stressful situations. The resilience scores range from 1.83–5.0, with higher scores indicating a greater ability to bounce back or recover from difficult experiences. The mean score for resilience in this sample was $M = 3.37$ ($SD = .61$). The achievement motivation score on the Achievement Motivation Measure is indicative of achievement thinking and behavior. The achievement motivation scores ranged from 32–70 of a possible range of 14–70, with higher scores representing higher levels of achievement motivation. The mean achievement motivation score for this sample was $M = 52.30$ ($SD = 7.68$). The relational skills score on the Relational Skills Inventory represents levels of relational skills. The relational skills scores ranged from 73–157, of a possible range of 32–160 with higher scores indicating higher levels of relational skills. The mean score for relational skills in this sample was $M = 118.27$ ($SD = 15.38$). The college adjustment score on the INCA represents college student adjustment. The college adjustment

scores ranged from 14–56, of a possible range of 14–56 with higher scores indicating higher levels of college adjustment. The mean score for college adjustment in this sample was $M=44.44$ ($SD=5.61$)

Table 2

<i>Descriptive Statistics of the Independent and Dependent Variables</i>				
	Minimum	Maximum	Mean	SD
Resilience	1.83	5	3.37	.61
Achievement Motivation	32	70	52.30	7.68
Relational Skills	73	157	118.27	15.38
College Student Adjust.	14	56	44.44	5.61

Criterion variable perceived academic performance was measured using the self-rating; frequencies were calculated, as shown in Table 3. A combined 84.1% of participants ranked average or above average ($n=259$).

Table 3

<i>Frequency Table for Perceived Academic Performance</i>				
	Frequency	Percent	Valid Percent	Cumulative Percent
Low	1	.3	.3	.3
Below average	20	6.5	6.5	6.8
Average	155	50.3	50.3	57.1
Above Average	104	33.8	33.8	90.9
Excellent	28	9.1	9.1	100.0
Total	308	100.0	100.0	

Research Question 2

A series of Pearson product-moment correlation coefficients were computed to evaluate relationships among variables. Correlation coefficients calculated using the criterion and predictor variables were examined. The coefficients computed ranged from .10 and .62, with a mean correlation of .31. Statistically significant positive correlations existed between all variables except

Performance Rating and Achievement Motivation ($r=.101$, $p < .001$). The following guidelines for interpreting correlation coefficients were utilized: 0.50 is large, 0.30 is moderate, and 0.10 is small (Cohen, 2013). Results demonstrated a moderate, positive correlation between resilience and college student adjustment ($r = 0.31$), college student adjustment and relational skills ($r=.50$), and between college student adjustment and achievement motivation ($r=.48$). Furthermore, large positive correlations were found between relational skills and achievement motivation ($r=.62$). Correlations are reported in Table 4.

Table 4

Pearson Product-Moment Correlation Matrix among Dependent and Independent Variables

	Perf. Rating	Resilience	CS Adjustment	Relational Skills	Achieve. Motiv.
Perf. Rating	----	0.25*	0.26*	0.12*	.10*
Resilience		----	0.31*	0.22*	.19*
CS Adjustment			----	0.50*	.48*
Relational Skills				----	.62*
Achieve. Motiv.					----

* $p < 0.05$

Research Question 3

Independent-samples t-tests were conducted to examine differences in college student adjustment and perceived academic performance of undergraduate college students based on gender. Alpha level was set at 0.05. Assumptions were tested by examining box plots and Levene's test for equality of variances. No violations of normality, linearity, or homogeneity of variance were detected.

No significant differences were found between males ($M = 44.24$, $SD = 5.66$) and females ($M = 44.78$, $SD = 5.07$) in terms of college student adjustment, $t(305) = -.88$, $p = 0.17$. Additionally, no significant differences were found between males ($M = 3.50$, $SD = .76$) and

females ($M = 3.42$, $SD = .74$) in terms of performance rating, $t(305) = .93$, $p = 0.58$. Results of these independent-samples t tests are reported in Table 5.

Table 5

Results of t-tests and Descriptive Statistics College Student Adjustment and Performance Rating by Gender

	Male			Female			t	p
	M	SD	n	M	SD	n		
College Student Adjust.	44.24	5.66	138	44.78	5.07	169	-.88	.17
Performance Rating	3.5	.757	138	3.42	.745	169	.93	0.58

* $p < 0.05$

Research Question 4

A standard multiple regression analysis was performed between college student adjustment and the predictor variable scores. Alpha level was set at 0.05. Assumptions were tested by examining normal probability plots of residuals and scatter diagrams of residuals versus predicted residuals. No violations of normality, linearity, or homoscedasticity of residuals were detected. Also, box plots revealed no evidence of outliers.

Regression analysis revealed that the model significantly predicted college student adjustment as measured by the INCA, $F(3, 304) = 50.96$, $p < .001$ R^2 for the model was 0.335, and adjusted R^2 was 0.328. This indicates that 33% of the variance in college student adjustment was explained by the model. According to Cohen (2013), this is a large effect. Table 4 displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients (β) for each variable.

In terms of individual relationships between the independent variables and college student adjustment, resilience ($t = 4.09$, $p < .001$) significantly predicted college student adjustment, uniquely accounting for approximately 3.6% of the variance; 3.7% of the predicted model was

accounted for by resilience, $sr^2 = 0.036$. Achievement motivation ($t = 4.38, p < .001$) significantly predicted college student adjustment, uniquely accounting for 4.2% of the variance, $sr^2 = 0.04$. Similarly, relational skills ($t = 4.91, p < .001$) significantly predicted college student adjustment, uniquely accounting for approximately 5.3% of the variance, $sr^2 = 0.05$. Power was sufficient for this study, $1 - \beta > .95$; given the sample size of $n = 308$, statistical significance would be detected for large effects sizes, $R^2 > 0.29$. Results of this regression analysis are reported in Table 6.

Table 6

Multiple Regression Results for College Student Adjustment

	B	SE B	β	t	P	sr^2
Resilience	1.797	0.439	0.197	4.090	0.000	0.0364
Achievement Motivation	.191	0.044	0.261	4.375	0.000	0.042
Relational Skills	.108	0.022	0.295	4.910	0.000	0.0529

* $p < 0.05$

Research Question 5

A standard multiple regression analysis was performed between performance rating and resilience, achievement motivation, and relational skills scores. Alpha level was set at 0.05. Assumptions were tested by examining normal probability plots of residuals and scatter diagrams of residuals versus predicted residuals. No violations of normality, linearity, or homoscedasticity of residuals were detected. Also, box plots revealed no evidence of outliers.

Regression analysis revealed that the model significantly predicted perceived performance rating, $F(3, 304) = 7.067, p < .001$. R^2 for the model was 0.065, and adjusted R^2 was 0.056. This indicates that 6.5% of the variance in performance rating was explained by the model. According

to Cohen (2013), this is a small effect. Table 5 displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients (β) for each variable.

In terms of individual relationships between the independent variables and performance rating, resilience ($t = 4.033, p < .001$) significantly predicted performance rating, uniquely accounting for 5% of the variance, $sr2 = .050$. Achievement motivation ($t = .354, p = .724$) was not significant and uniquely accounted for 0% of the variance, $sr2 = .0001$. Similarly, relational skills ($t = .720, p = .472$) was not significant and uniquely only accounted for .16% of the variance, $sr2 = .0016$. Power was sufficient for this study, $1 - \beta > .95$; given the sample size of $n = 308$, statistical significance would be detected for large effects sizes, $R^2 > 0.06$. Results of this regression analysis are reported in Table 7.

Table 7

Multiple Regression Results for Performance Rating

	B	SE B	β	t	p	sr2
Resilience	.285	0.071	0.230	4.033	0.000	0.0501
Achievement Motivation	.002	0.007	0.025	.354	0.724	0.0004
Relational Skills	.003	0.004	0.051	.720	0.472	0.0016

* $p < 0.05$

Discussion

Three hundred and eight undergraduate students completed four surveys: Brief Resilience Scale (BRS), Achievement Motivation Measure (AMM), Relational Skills Inventory (RSI) and the Inventory of New College Student Adjustment (INCA), along with a Demographic Survey (DS) that included student grade point rating of college performance. Univariate and multivariate

statistics were used to examine differences between males and females. Regression equations using moderation analyses were utilized to study the influence of predictor variables—resilience, achievement motivation, and relational skills—in terms of variance attributed to college student adjustment and performance rating levels.

Research question one reports the levels of all variables, described by descriptive statistics, including mean and range of each. Research question two uses the Pearson correlation series to report the relationship among all variables. All produced statistically significant positive correlations, except between Performance Rating and Achievement Motivation. Results of this study regarding relational skills cannot be compared with extant literature, because it is a newly identified construct regarding education.

The largest positive correlations were between Relational Skills and Achievement Motivation and between Relational Skills and College Student Adjustment. Research question three explores differences in college adjustment and perceived academic performance based on gender. Independent-samples *t* tests did not reveal statistically significant group differences in the levels of achievement motivation, resilience, and relational skills based on gender.

Studies exploring the role of demographic influences on achievement motivation and academic achievement have produced mixed results. Kaushik and Rani (2005) found no significant difference in achievement motivation between male and female students. Liu and Zhu (2009) reported males have higher levels of achievement motivation than females in a study of 278 high school seniors. On the other hand, Shekhar and Devi (2012) found females have higher levels of achievement motivation than males among undergraduate college students. Glenn and Van Wert (2010) found males are less likely to persist to and graduate from college.

The absence of significant difference between gender in terms of college adjustment or performance rating, might be explained by the performance rating being measured by self-rating and not grade point average, as is common when measuring academic achievement. Regarding future research or follow up to this study, it is recommended that the construct “perceived performance” perhaps evolve to “academic performance” as measured by grade point average. Questions four and five explore the percent of variance each predictor variable contributes to the criterion variables college adjustment and perceived performance, respectively.

With regard to college adjustment, 33% of the variance was explained by the model. Of the three predictors, resilience uniquely accounted for the most variance at 5.7%. In practical terms, it is logical that higher levels of resilience would contribute to higher levels of adjustment for college students. The results of this study question were consistent with similar findings in which a statistically significant relationship was identified between achievement motivation and resilience (Arora, 2015). This finding was consistent with the extant literature (e.g., Leary & DeRosier, 2012), suggesting that students who reported greater resilience indicated higher college adjustment. The results of this study also support Solomon’s (2013) observation about achievement motivation, and resilience. Solomon (2013) ascertained that some characteristics of achievement motivation, such as competition and optimism, were positively correlated with resilience. In this study, participants scored high on the college adjustment measure (INCA) and 84% reported their academic performance as average or above. Largely, the sample could be considered well adjusted and reported high perceived performance.

Research question five utilized regression analysis to reveal that the model significantly predicted perceived performance rating, and 6.5% of the variance in performance rating was explained by the model. Resilience significantly predicted performance rating and uniquely accounted for 5% of the variance. Kwek, Bui, Rynne, and So (2013) also found resilience to be a

significant predictor of academic performance. In a study utilizing a college athlete population, Aurora (2015) found a statistically significant relationship identified between achievement motivation and resilience. Findings from this study support that of Mwangi, Okatcha, Kinai, and Iiri (2015) and reveal a positive and significant relationship between academic resilience and academic achievement. Additionally, achievement thoughts and behaviors were significant predictors of resilience. In contrast, achievement motivation and relational skills were not significant and did not contribute to the variance in the model.

This study has implications for educators, university administration, and university counseling centers. University administration and college personnel may benefit from the findings of this study due to the relevance of college student adjustment and the predictor variables. Additionally, the results of this study will be useful to college counselors and university counseling centers as it contributes to the understanding of the areas of upperclassmen undergraduate student adjustment, relational skills, resilience, achievement motivation, and perceived performance. These findings may also provide support for educators to implement programs to assist in improving the performance of college students as they face challenges throughout their college career. Relational skills, being a relatively new construct, may have implications utilizing programs to encourage student relationships and coping (resilience). Student success translates to higher retention and lower attrition rates, which we know affects university funding. The study has significance to school counselors, college counselors, college administrators, and educators by adding to the limited body of knowledge on the factors of resilience, achievement motivation, and relational skills of undergraduate college students as they relate to college success. A growing number of undergraduate college students are experiencing difficulty meeting the expectations and challenges while enrolled in college. The majority of studies on success rates and attrition have focused on the adjustment and performance of college freshmen. There is a plethora of data about

the transition of students who leave high school and enter college. It should be noted that adjustment occurs throughout one's college experience. Academic challenges often increase with the expectation that students conduct more in-depth research during their senior years of college. After completing general studies courses, many covering similar topics that were studied in high school, college juniors and seniors face additional challenges involving adjusting to more rigorous courses. Expectations during one's last two years of college might be higher, thus challenging one's level of resilience and motivation.

Results from this study could be useful in indicating information about upperclassmen students in terms of the constructs studied (resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance). Upperclassmen students had reasonably high scores on the four measures. These four measures could be useful in predicting how future students would perform if they had moderate to high scores on the instruments used in this investigation. Findings from this study perhaps will provide support for college instructors to implement programs related to resilience, coping, achievement, and relational skill building that could have a positive effect throughout one's entire college experience. These programs could assist in improving the performance of college students as they face challenges throughout their college experience. If we understand more about the factors associated with college success, we will be able to address attrition trends in a way that best supports student achievement. College counselors perhaps can draw on findings from this study to assist undergraduate students as they enter college, and as they continue their studies throughout college. College counselors may gain further insight into undergraduate students who are in their third and fourth year of college.

The present study contributed to the empirical literature on academic performance and college adjustment of undergraduate students. However, the findings from this study may have been impacted by certain limitations, which may hinder the generalizability of the results. The

limitations associated with this analysis generally pertain to the sample utilized in the study. This study employed a convenience sample of junior and senior level undergraduate students enrolled in business courses at a regional public four-year university in South Texas. Therefore, a limitation of this study is generalizability, as the potential for demographic representation to be fairly homogenous in terms of ethnicity and age exists. The fact that all participants were from the college of business may also have impacted results. It is unknown whether results might have been different if the study were conducted with students from various colleges and departments. This would be a recommendation for further research. Self-reported responses on questionnaires and surveys are subject to response bias and increased error in reliability and validity. Social desirability is the tendency of some respondents to report an answer in a way they deem to be more socially acceptable than would be their "true" answer. They do this to project a favorable image of themselves and to avoid receiving negative evaluations. The outcome of the strategy is overreporting of socially desirable behaviors or attitudes and underreporting of socially undesirable behaviors or attitudes (Morgado et al. al., 2017).

Finally, the study may be narrowed by concentration on only three of the many factors that might predict college adjustment or perceived academic performance: resilience, achievement motivation, and relational skills. The researcher does not imply that the variables under investigation in this study are the only valid factors for predicting college adjustment or perceived academic performance. Furthermore, the measure used to survey college student adjustment, the INCA, was created for administration to college freshmen, not for upperclassmen, as was used in this study.

In conclusion, the study uses validated measures to explore the relationship of three predictor variables among college student adjustment and perceived performance of junior and senior level business students enrolled at a public four-year university in South Texas. University

administration and college personnel may benefit from the findings of this study due to the relevance of college student adjustment and the predictor variables. Results from this study may be useful in indicating information about upperclassmen students in terms of the constructs studied (resilience, achievement motivation, relational skills, college adjustment, and perceived academic performance). Upperclassmen students had reasonably high scores on the four measures. These measures used in this study could be useful in predicting how future upperclassmen students would perform if they earned moderate to high scores on the instruments used in this investigation.

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APPENDICES

Appendix A: Demographic Data Form

Demographic Data Form

Age: _____

Gender: (circle one)

Male Female

Ethnicity: (circle one)

African American	Asian American	Hispanic or Latino(a)	Native American or Pacific Islander	White, Non- Hispanic	Bi-racial	Other
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Student Status: (circle one)

First Generation *you are
first person in family to
attend college*

Second Generation
Parent attended college

Third Generation *parents'*
grand parents *attended
college*

Academic Load (i.e., how many credit hours are you taking this semester): _____

Living Situation: (circle one)

Live on campus
with a roommate

Live off campus
with a
roommate

Live on-
campus by
yourself

Live off campus
by yourself

Live at home
with family

Work Situation (circle one):

Not currently employed

On-campus employment
(work study/assistantship)

Off-campus employment

Performance Rating

I would rate my overall performance in college so far as: 1 –low; 2 –below average;

3 –average; 4 –above average; 5 –excellent

An estimate of my grade average in high school is _____

My grade point average at midterm of this year in college is _____

Thank you, please continue

Appendix B: The Inventory of New College Student Adjustment (Watson & Lenz, 2018)

Directions: Please read each question carefully and answer according to your level of agreement with each item since you have been at the university using the following scale:

Strongly Disagree	Disagree	Agree	Strongly Agree
SD	D	A	SA

1	My study habits are effective	SD	D	A	SA
2	Past experiences help me cope with the demands of college	SD	D	A	SA
3	I believe I handle university well	SD	D	A	SA
4	My classmates value my opinions	SD	D	A	SA
5	Challenging courses make me a better student	SD	D	A	SA
6	My friends support me as I work toward my goals	SD	D	A	SA
7	Most people would describe me as levelheaded	SD	D	A	SA
8	I always see the good in situations	SD	D	A	SA
9	I am enjoying college life	SD	D	A	SA
10	My friends help me to grow in important ways	SD	D	A	SA
11	My family's support makes me feel stronger	SD	D	A	SA
12	My friends really care about supporting me	SD	D	A	SA
13	I know what I will do after graduation	SD	D	A	SA
14	I can be real with at least a few of my friends	SD	D	A	SA

Appendix C: The Brief Resilience Scale (Smith et al., 2008)

Directions: Please respond to each item by circling a letter.

<i>Questions</i>		<i>Response</i>				
		<i>Strongly Disagree</i> <i>A</i>	<i>Disagree</i> <i>B</i>	<i>Neutral</i> <i>C</i>	<i>Agree</i> <i>D</i>	<i>Strongly Agree</i> <i>E</i>
1	I tend to bounce back quickly after hard times	A	B	C	D	E
2	I have a hard time making it through stressful events	A	B	C	D	E
3	It does not take me long to recover from a stressful event	A	B	C	D	E
4	It is hard for me to snap back when something bad happens	A	B	C	D	E
5	I usually come through difficult times with little trouble	A	B	C	D	E
6	I tend to take a long time to get over setbacks in life	A	B	C	D	E

Appendix D: The Achievement Motivation Measure (Smith et. al., 2019)

The Achievement Motivation Measure, which was the third instrument used for this study, is in the process of publication. The AMM was developed by Dr. Robert L. Smith, Department of Counseling and Educational Psychology, Texas A&M University-Corpus Christi. Example inventory items from this 14-item scale include:

1. I feel that my present work is meaningful.
2. I try to follow the rule: Business before pleasure.
3. I like to undertake projects that involve some risk.
4. Despite the uncertainty of the future, it pays to make plans.
5. I like to know how I am performing when working on a task.

For more information about this scale, you can contact Dr. Smith at robert.smith@tamucc.edu.

Appendix E: The Relational Skills Inventory (R. L. Smith, personal communication, May 1, 2019)

The Relational Skills Inventory, which was the fourth instrument used for this study, is in the process of publication. The RSI was developed by Dr. Robert L. Smith, Department of Counseling and Educational Psychology, Texas A&M University-Corpus Christi. Example inventory items from this 32-item scale include:

1. I am clear and concrete in my communication with others.
2. I make it a point to empower others.
3. I try to understand the culture of others.
4. My words and feelings are congruent.
5. People that I just meet, tend to trust me.
6. I am aware of my surroundings.
7. My presence tends to create a safe environment.

For more information about this scale, you can contact Dr. Smith at robert.smith@tamucc.edu.