

A Dissertation

entitled

Tinto's Student Integration Model & Diathesis Stress Model: Adverse Childhood Events,
Resilience, & Retention in a First Year University Population

by

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Submitted to the Graduate Faculty as partial fulfillment of the requirements for the
Doctor of Philosophy Degree in Counselor Education & Supervision

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An Abstract of

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While budgets are being cut and positions not being refilled, it is no surprise that universities are also beginning to feel the effects of a weakened economy. Student retention has remained a prominent issue in the literature for several decades now, still with no definite answer on why students fail to persist and graduate (Morrow & Ackerman, 2012). In an effort to gain more insight into this phenomenon, the purpose of this study is to understand retention by assessing resiliency in students who have experienced adverse childhood events. The goal of this study is to identify if resiliency, as a psychosocial factor, influences student persistence in the first year at a university when the student is identified as at-risk (i.e. the student has dealt with an identified past trauma). An agglomeration of Tinto's Student Integration Model and the Diathesis Stress Model will be used to understand how resilience and psychopathology can affect persistence decisions in the first year. If services can be implemented for students in their first year, it is possible that more students would persist and graduate.

Keyword(s): resilience, retention, Student Integration Model, Diathesis Stress Model

To my family, friends, colleagues, and professors...thank you for your support and encouragement of my success!

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List of Symbols

α	Cronbach's alpha
η	eta squared, effect size
λ	Wilks' lambda
χ^2	Chi-Square
F	F statistic for ratio of variances
p	p-value, the chance of obtaining the observed result if no real relationship exists
r	correlation coefficient, the degree of the relationship between two variables

Chapter One

Introduction

Chapter 1 will provide an introduction to the construct of resilience, including the etiology and various definitions of the term. The university freshmen population will be discussed as the population of interest in this study in relation to retention from first year to second year at colleges and universities. Chapter 1 will then address the research problem being investigated, the purpose of the study, the research hypotheses, and the significance of the present study. The chapter will then conclude with an overview of the organization of the dissertation.

Resiliency in At-Risk University Freshmen

American colleges and universities' budgets have been reduced as a consequence of a number of factors, including the shrinking number of high school graduates (Christian, 2006), reduced state-level support consequent of the effect of the recent recession's impact on collected taxes (Barr & Turner, 2013), and states' increased need to balance budgets by increasing tuition and fees (Yagil, 2008). As a result, universities are tasked with having more responsibilities with fewer resources (Yagil). With diminished resources, there has been an emphasis placed on student retention at the post-secondary level. Many states are translating this emphasis into accountability measures (i.e. reporting outcomes) for higher education (Tinto, 2006b).

This phenomenon is particularly true in large urban universities in Ohio, where budgets and jobs are being cut. Ohio's universities faced a 13 percent drop in funding in 2012 – even though the governor's proposed budget showed an overall 2.7 percent

increase in state support for higher education (Ohio Board of Regents, 2013). The Ohio Board of Regents reported this disparity in funding occurred because colleges no longer had the one-time infusion of federal stimulus funds that were used to strengthen budgets over the past two years as the state struggled through the economic downturn. In addition to the financial disparities experienced by the state and university levels, identifying factors that encourage or discourage student persistence onto another year of college warrants further investigation.

There are specific psychosocial factors (e.g., motivation, clear goals, social/familial support) that encourage students to enter a university; just as there are reasons that students fail to persist. Students leave universities for a variety of reasons, including: academic difficulty, adjustment problems, uncertain goals, lack of commitment, inadequate finances, lack of student involvement, poor fit, and/or mental health issues (Tinto, 2011). The problem is that while most universities are allocating resources to get students to attend the universities, little effort has been applied to understanding the reasons why students fail to persist from the first year to the second year, especially for those who have experienced aversive traumatic life events. Graduation rates among students enrolled in United States colleges and universities are below 50% and approximately 22% of first year college students at public degree granting institutions in the United States do not return for their sophomore year (American College Test (ACT), 2011). Additionally, over a six-year period, only 55% of the students who begin a bachelor's degree program at a four-year or university will complete it at that same institution (Consortium for Student Retention Data Exchange,

2002). The need to further investigate the reasons for low graduation rates and the lack of persistence in the first year will assist the researchers to identify ways to advocate for immediate attention in these areas.

The literature states that the first year is the most critical in shaping persistence decisions and plays a formative role in influencing student attitudes and approaches to learning (e.g., Fitzgibbon & Prior, 2003; Pascarella & Terenzini, 1991; Tinto, 1987, 1996). Trotter and Roberts (2006) encouraged universities to prioritize first-year resource allocation to understand what stands out or changes in the first year that encourages students to persist. Added to the unique challenges (e.g., transition from home, the loss of social support from friends and family; increased difficulty of coursework) of entering a university, are the stressors faced by some students identified as “at-risk” of not being retained by the university from first year to second year. Factors such as a trauma history, prior school performance, economic disadvantages, and mental instability place college students “at-risk” for drop-out (Hartley, 2010). Academic persistence, or the ability to successfully complete academic goals (Reason, 2009), depends on the complex interplay between the student and his or her ability to integrate academically, referring to attending class and studying, and socially, referring to fitting into the university over time (Tinto, 1993). In other words, persistence depends on characteristics of the university and of the individual.

Student retention and matriculation through higher education is beneficial to the student and to the university. As a student, the decision to leave college often puts him or her in the position to earn much less over a lifetime of work (DeBernard, Spielmans, &

Julka, 2004); therefore, successful matriculation from an institution of higher education translates into more money over the lifetime. The National Center for Education Statistics (2013) found that in 2011, the median earnings for young adults with a bachelor's degree was \$45,000, while the median was \$22,900 for those without a high school diploma or its equivalent, \$30,000 for those with a high school diploma or its equivalent, and \$37,000 for those with an associate's degree. In other words, young adults with a bachelor's degree earned twice as much as those without a high school diploma or its equivalent, 50% more than young adult high school completers, and 21% more than young adults with an associate's degree. College attendance and completion provide other benefits as well. For example, adults who have attended some college or earned a bachelor's degree are more likely to report "excellent" or "very good" health than those who have only a high school diploma, even when they have comparable incomes (Baum & Ma, 2007). Additionally, college is often where people form their deepest friendships and meet future spouses or partners. Finally, research shows that educational attainment has positive effects on voting and other measures of civic engagement (Thomas, 2004).

The individual student is often positively affected by the successful matriculation through an institution of higher education; however, if the student fails to complete his/her program and does not graduate; there can be negative consequences to the university. Students are a source of revenue for universities, along with government subsidies for public institutions. Low retention rates translate into the college or university having to work harder to replace students who leave, requiring more resources and time that could be utilized elsewhere. DeBernard, Spielmans, and Julka (2004) found

that for each student that leaves before degree completion, this costs the university thousands of dollars in unrealized tuition, fees, and alumni contributions, resulting in a palpable economic loss. Identifying and implementing procedures to protect this specific population in higher education would serve as an attempt to be inclusive as well encouraging of persistence.

While little attention has focused on those non-academic factors that predict graduation, one factor that has been identified is resilience. Resilience has emerged to uncover how some individuals behave adaptively under great stress (Masten, 2001). Resilience may help explain why some individuals with aversive traumatic events in their past are able to cope with the complexities of college learning and earn a degree, while others with similar experiences are not; ultimately failing to persist or matriculate through an institution of higher education.

Definition of Terms

To aid the reader in developing a lexicon useful to comprehend the terms employed in this study, the author offers the following definition of terms. The first term of importance is *retention*, which means how well universities keep students progressing from year to year (Tinto, 1975). For the purposes of this study, the term *failure to persist* is used to describe those students who have decided not return to a specific university or continue on for another year at a university, for any reason and thus those who withdrew. Tinto (2011) reported that academic difficulty, adjustment problems, uncertain goals, lack of commitment, inadequate finances, lack of student involvement, and poor fit to the institution are just a few of the reasons why students are not retained. *Academic*

persistence is then the motivation and ability to continue on from year to year through an academic program concluding with *matriculation*, or a successful completion of a degree program and final step concluding the collegial experience (Reason, 2009).

The term *Diathesis Stress Model* (e.g. Ingram & Luxton, 2005) refers to a theoretical approach that posits that individuals have pre-existing vulnerabilities that contribute to depressive symptoms and diagnoses only in the presence of life stress (e.g., Abela, Aydin, & Auerbach, 2006; Eberhart, Auerbach, Bigda-Peyton, & Abela, 2011). This model asserts that if the combination of the predisposition and the stress exceeds a threshold, a person will develop a disorder (Eberhart & Hammen, 2010). Furthermore, the Diathesis-Stress Model helps to explain why persons who experience the same environmental stressors can react significantly differently to those stressors depending upon their genetic predisposition. An additional model that will be addressed in this study is the *Student Integration Model*, developed by Tinto (1975; 1994). The three general facets of Tinto's (1975) model are: (a) students enter college with different levels of academic preparation and characteristics; (b) they develop different levels of integration into an institution's academic social system, including various strengths and diversity in preparation standards; and (c) they develop different levels of integration into an institution's social system, including the establishment of different levels of interaction with peers through formal, semi-formal, and informal groups and with adult members of the academic community. Tinto proposed that if academic and social integration are positive, commitment and motivation to attain a degree are enhanced.

Stress or *stressor* are two terms used throughout this paper which refer to a life event or

series of events that can disrupt a person's psychological equilibrium and potentially serve as a catalyst to the development of a disorder (Eberhart et al., 2011). *Resilience* is a term used throughout this study to identify certain psychosocial factors that assist first year "at-risk" students in being successful in higher education despite environmental stressful events. The researcher will measure retention within year (i.e. first semester to second semester). Connor and Davidson (2003) note that "resilience embodies the personal qualities that enable one to thrive in the face of adversity" (p. 76). Events that may make students deemed "at risk" for dropping out of an institution of higher education might include a childhood trauma, poor college preparation, instability and lack of support within the familial unit, mental health problems, minority status, and/or economically disadvantaged (Tinto, 2011), in total, these are examples of environmental stressors that affect the student's ability to persist onto another year.

Individuals who exhibit resilience often have *protective factors*, that is personal qualities or contexts that predict positive outcomes under high-risk conditions (Masten, 2001). Resilience researchers have identified a range of internal and external protective factors associated with success despite the presence of risk. Internal protective factors include: 1) good cognitive capacities, 2) adaptive personality, 3) positive self-efficacy, 4) faith and a sense of meaning, 5) self-regulation of emotional arousal impulses, and 6) a good sense of humor (Masten & Reed, 2002). External protective factors include 1) good emergency social services, 2) high levels of public safety, 3) access to positive peer relationships, and 4) an adult who shows interest and caring (Masten & Reed).

There are also *risk factors*, or the characteristics of individuals, environments, and the interactions between individuals and environments associated with poor developmental outcomes (Glantz & Johnson, 1999). There are multiple risk factors that can lead individuals to drop out of college, including the overall environment which can be stressful. The college environment is often characterized by: 1) high-stakes academic pressure and competition, 2) minimal academic support compared with high school, 3) faculty and staff who are more distant than high school teachers and counselors, 4) potential social isolation or alienation as students transition into a new environment, 5) undergraduate culture of excessive alcohol and drug abuse, and 6) pressure of long-term financial debt (Archer & Cooper, 1998; Kadison & DiGeronimo, 2004). Being able to identify protective and risk factors is helpful to understand why some students who have experienced aversive traumatic events thrive or fail to persist. In addition to both sets of factors, are unique environmental stressors that thwart student progress.

Environmental Stressors

There are several stressors that may affect a student's decision to remain engaged and persist onto the next year at a university, including: an identified trauma (e.g., Duncan, 2000), cost/financial difficulty (e.g., Tinto, 2011), poor academic preparation (e.g. Brown & Robinson, 1997), lack of support/integration at a university (e.g. Morrow & Ackerman, 2012), and mental illness (e.g. Hartley, 2010). While each of these stressors has the potential to affect the student's likeliness to continue on, it is often difficult to identify the degree to which the stressor plays individually and collectively with other stressors.

A student stressor identified throughout this study is having experienced an aversive traumatic event in the past. Many college students arrive to campus with a history of exposure to traumatic events, with childhood traumas, such as abuse, having been linked to an increased likelihood of dropping out of college (e.g. Duncan, 2000), depression (e.g. Wagnild & Young, 1993), and suicide (e.g. Bridgeland, Duane, & Stewart, 2001). Students bring these issues with them to the college environment and are unwilling to share these experiences at times, especially to those who could be of assistance (i.e. counseling center, support services). Issues may manifest in negative ways that could potentially impact their success in college or issues may not cause problems at all. However, when a traumatic experience surfaces and academic or personal issues arise, the student either uses a learned coping skill(s) or does not cope and drops out (Banyard & Cantor, 2004). It is difficult to know if, when, or how a traumatic reaction will occur; however, according to Banyard and Cantor, students who have been through a trauma are at more risk for a failure to persist than those without a past trauma.

Another stressor that affects a student's decision to remain engaged at a university is the cost of attendance. Students' choices regarding whether or not to attend college, which college to attend, whether to go full-time or part-time, what to study, whether to drop out, transfer, or matriculate, are all examples of important choices linked to considering their financial status and the supports granted (Kaltenbaugh, St. John, & Starkey, 1999). Over the past three decades, the federal government shifted the means of fulfilling the commitment to equal opportunity in higher education from primarily using grants to mainly using student loans (St. John, 1994). A consequence to this shift has been

that state support for public colleges and universities decreased as an overall trend across the United States (Callan & Finney, 1997). Additionally, Callan and Finney found that the burden of paying for college was shifted from the general public to the individual students and their families, which has caused disparities in retention among students, particularly for minority and low-income students. Numerous studies suggest that minority students are competitively disadvantaged in access to higher education, choice of colleges, and degree completion in American higher education (Baker & Valez, 1996; Carter, 1999; Pascarella & Terenzini, 1991). However, research also indicates that minority students are more sensitive to prices and less willing to use educational loans (Kaltenbaugh, St. John, & Starkey, 1999; St. John, 1991). Overall, shifting prices and unexpected expenditures impact student retention (St. John, 2003b).

Sometimes due to campus growth, and other times due to budget issues, universities are forced to raise the price of tuition and fees as a way to offset costs (Yagil, 2008). For example, during the 2011-2012 academic year, the average annual price for undergraduate tuition, fees, room, and board was \$14,292 at public institutions and \$33,047 at private nonprofit institutions (National Center for Education Statistics, 2013). A similar study was done two years later and found that the average annual price for undergraduate tuition, fees, room, and board was \$16,789 at public institutions and \$37,906 at private non-profit institutions, a difference of \$2497 and \$4859, respectively (National Center for Education Statistics, 2013). Students are often unaware of how tuition and fee rates will change throughout their 2-5 years at the institution, leaving the student in a state of stress and confusion as to how to continue paying for the experience.

Poor academic preparation and performance were also acknowledged in the literature as variables that endanger a student's persistence onto another year in college (e.g., Brown & Robinson, 1997; Cejda & Rewey, 1998; Wessell, Engle, & Smidchens, 1978). When examining student retention, a common practice is to predict student retention status or cumulative grade average, which involves cognitive and noncognitive factors. With cognitive factors, several empirical studies found that high school grade point averages and standardized aptitude scores were significant predictors of academic success at the post-secondary level (e.g., Harackiewicz, Barron, Tauer, & Elliot, 2002; Murtaugh, Burns, & Schuster, 1999). Cejda and Rewey (1998) in their study about the effect of academic factors on transfer student persistence found a similar correlation. In addition to academic performance measured by GPA, goals, and planning about education were also indicative of a student's success. Wessell, Engle, & Smidchens (1978) claimed that students who made relatively early decisions of educational goals persisted more in school as compared to those who delayed their academic planning. Brown and Robinson (1997) completed a similar analysis two decades later and found that academic preparation and aspirations, academic performance, and interactions with faculty and staff could differentiate between those who persisted and those who did not persist in school.

Additionally, students who do not feel connected to a university through social support or integration will express low satisfaction in this area (e.g., Sparkman, Maulding, & Roberts, 2012; Tinto, 1993). Tinto (1987, 1993, and 1994) developed an explanatory, predictive model of the dropout process that has the concepts of academic

and social integration within the institution, known as the *Student Integration Model*. Tinto believed that the level of integration is inversely related to the potential that a student will drop out. In other words, the more a student integrates, the less likely the student is to drop out of an institution. To be successful in the pursuit of a degree, students need to achieve a level of commitment to their career, academic goals, and the institution (Tinto); without this integration, the failure to persist is likely.

Finally, mental and/or other disabilities can be stressors that affect a student's ability to persist. Each year approximately one in four Americans experiences a diagnosable psychiatric disability (National Institute of Mental Health, 2006). An increasing number of these individuals are attending or would like to attend college (e.g., Collins, 2000; Corrigan, 2003), and are more recently able to due to new and improved psychotropic medications and psychiatric treatments (Collins & Mowbray, 2005). Recent estimates of the prevalence of mental health issues on college campuses are as high as 30% (Eisenberg, Golberstein, & Gollust, 2007). Despite this trend, individuals with psychiatric problems are more likely than others to withdraw from college without a college degree. In a national survey, Kessler, Foster, Saunders, and Stang (1995) found that 86% of individuals with psychiatric disabilities dropped out of college without completing a degree. In that same study, Kessler et al. estimated that in 1990, an additional 4.3 million people would have obtained a college degree if they had not experienced psychiatric symptoms. In addition to their psychiatric diagnosis, typical reasons for drop out included active symptoms, lack of academic integration, and lack of supportive peer relationships (e.g., Megivern, Pellerito, & Mowbray, 2003). Besides mental illness, students with

intellectual disabilities (ID) are more likely to be unemployed, underemployed, and/or only partially represented in comparison with their peers without disabilities (Johnson, Mellard & Lancaster, 2007). Johnson et al. also found that students with ID are less likely than peers without a disability to graduate high school, obtain competitive employment, and/or live independently. When these issues are not taken into account early on, a student may feel overwhelmed and underprepared to face the barriers of accessing higher education.

Regardless of the issue, the environmental stressors discussed have an effect on a student's decision to remain engaged and persist onto a second year at a university. While complex and interwoven, each factor should be considered when studying retention as a social problem for American colleges and universities. Further investigation in the area would discuss the degree to which each particular issue impacts student retention decisions.

Resilience Literature

While little attention has focused on those non-academic factors that predict graduation, one factor that has been identified is resilience. Resilience has been studied within the context of several helping disciplines, including nursing, psychology, and social work (e.g., Greene, 2010; Smith-Osborne, 2007; Tusaie & Dyer, 2004). The topic of resilience has been studied in a wide range of populations including children (e.g., Huey & Weisz, 1997), adults (e.g., Khoshouei, 2009), and trauma survivors (e.g., Wagnild & Collins, 2009). The multidisciplinary research efforts into resilience produced a wide range of definitions of the construct; many of which evolve from the divergent developmental ideas of why and where resiliency stems from (Luthar & Cicchetti, 2000). Often used interchangeably with the word resiliency, resilience can be described as a

personality characteristic that moderates the negative effects of stress and promotes adaptation in the face of change or misfortune (Wagnild & Young, 1993).

Research over the past few decades has described resilience as a multidimensional characteristic that varies from person to person. It manifests through individuals based on circumstance, context, time, age, gender, and cultural origin (e.g., Connor & Davidson, 2003; Garmezy, 1985; Werner & Smith, 1992). A group of researchers began investigating the term *resilience* during the 1970s focused on understanding adjustment and resilience in children at-risk for psychopathology and problems in development due to genetic or experiential circumstances (e.g., Garmezy, 1985; Rutter, 1987; Werner, 1982, 1984). There are two opposing schools of thought represented in the literature that have operationally defined the construct of resilience as either a personality trait (or cluster of traits) (e.g., Block & Kremen, 1996; Waugh, Fredrickson, and Taylor, 2008) or as a dynamic process of personal, interpersonal, and protective factors, resulting in an abnormally positive outcome in the face of adversity (e.g., Greene, 2007, 2010; Luthar & Cicchetti, 2000; Smith-Osborne, 2007; Werner, 1982).

In one corner, a process approach to resilience has been identified. Luthar and Cicchetti (2000) defined resilience as “a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma” (p.585). They understand resiliency to be a two-dimensional construct that implies both the exposure to adversity and the manifestation of positive adjustment outcomes in an individual; therefore, a process rather than a trait. However, in the opposite corner, Block and Kremen (1996) described resilience as a trait, also known as *ego resiliency*. This trait

refers to an individual characteristic reflecting resourcefulness, sturdiness of character, and flexibility of functioning in response to varying conditions. Block and Kremen identified ego resiliency as trait resilience, that is, the ability to dynamically and appropriately self-regulate that allows highly resilient people to adapt more quickly to changing circumstances. Describing resilience as a trait rather than a process, allows for the reflection and acceptance of unique differences among people that may be present from as early as birth.

Regardless of the specific verbiage used to describe the construct of resilience, several researchers (see, for example, Garmezy, 1985; Rutter, 1987; Seligman & Csikszentmihalyi, 2000; Werner, 1984) would agree that resilience is a multidimensional characteristic that varies with context, time, age, gender, and cultural origin, as well as within an individual subjected to different life circumstances. For the purposes of this research, resilience will be defined as the “process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990, p. 406).

A resilience framework, which is asset-based, suggests that all individuals can achieve college success by using protective factors despite the presence of risk. Resilience researchers have considered resilience to be a function of the complex interplay between protective factors and risk factors, in which the individual influences a successful outcome by using protective factors to support success (Eageland, Carlson, & Soufre, 1993). Kaplan (1999) found that resilience involves this ability to use protective factors to fulfill age-appropriate developmental tasks.

Diathesis Stress Model

The Diathesis Stress Model (e.g. Ingram & Luxton, 2005) will serve as the basic theoretical framework for this study. Eberhart and Hammen (2010) identified the Diathesis-Stress Model as a psychological theory which explains that pre-existing vulnerabilities sometimes lead to the development of psychopathology. The diathesis, or a predisposition to something, interacts with the related stress response of the individual (Belsky & Pluess, 2009). Belsky and Pluess described that central to this framework, is the view that some individuals, due to a “vulnerability” in their make-up, are disproportionately likely to be adversely affected by an environmental stressor. These “vulnerabilities” could be behavioral/temperamental in character (e.g., difficult temperament), physiological or endophenotypic in nature (e.g. highly physiologically reactive), environmental, or genetic in origin. Examples of stressors include, but are not limited, to the following: child maltreatment, insensitive parenting, access to healthcare and education, or untimely incidents/injury (Belsky & Pluess, 2009). The stress model is useful in making sense of the interplay of the environment (i.e. nature versus nurture debate) in how susceptible a client is to developing a psychological disorder through the lifespan. It assists in identifying and explaining why some people are more “at-risk” for developing a disorder (Eberhart & Hammen, 2010). The Diathesis Stress Model will assist the researchers of this study to understand if those students, who have experienced an aversive traumatic event preceding their entrance in and transition to university life, were more susceptible to stress and related problems (e.g., academic, social, professional).

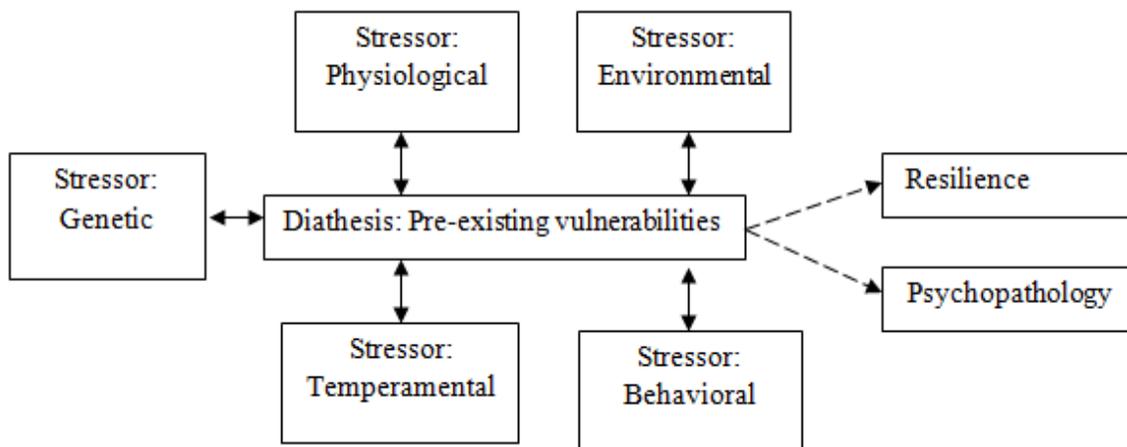


Figure 1. Diathesis Stress Model. The diathesis, or a predisposition to something, interacts with the related stress response of the individual. Pre-existing vulnerabilities could be behavioral/temperamental in character (e.g., difficult temperament), physiological or endophenotypic in nature (e.g. highly physiologically reactive), environmental, or genetic in origin.

Tinto's Model of Student Integration

Tinto (1987, 1993, and 1994) developed an explanatory, longitudinal model of the persistence/withdrawal process, known as the *Student Integration Model*, which is based largely on the degree of fit between the individual student and institutional environment. It depicts the dropout process to have the concepts of academic and social integration within the institution. The model suggests that students come to a particular college or university with a range of background traits (e.g. race, secondary school achievement, academic aptitude, family, educational, and financial contexts). The characteristics lead to initial commitments, both to the goal of graduation from college and to the specific institution attended. Together with these background characteristics, these initial commitments are hypothesized as influencing, not only how well the student will perform academically, but also how he or she will interact with and subsequently become integrated into, the

institution's social and academic systems. With all other things considered equal, the greater the individual's level of social and academic integration, the greater his or her subsequent commitment to the institution and commitment to the goal of college graduation. These commitments, in turn, are seen, along with levels of integration as having a positive influence on persistence. In other words, the more a student integrates, the less likely the student is to drop out of an institution.

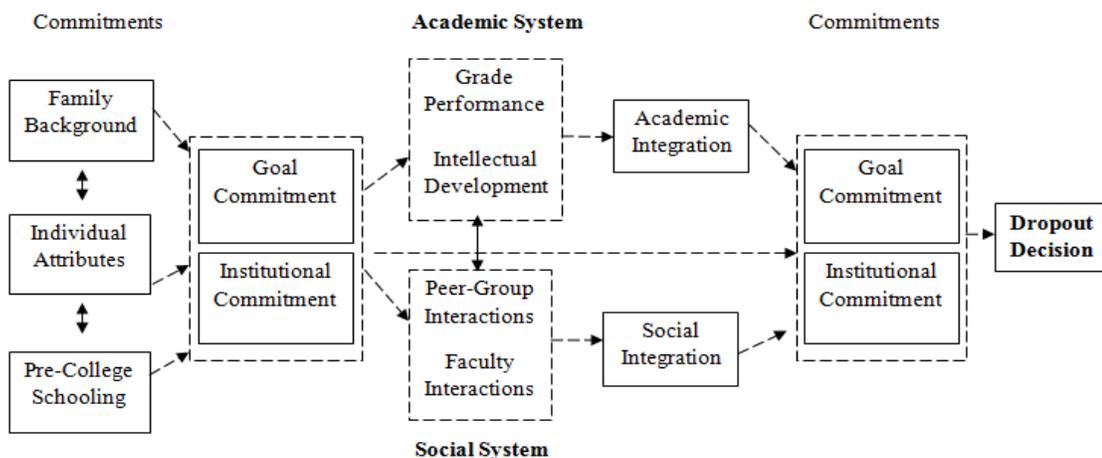


Figure 2. Tinto's Student Integration Model (Tinto, 1975). The model suggests that students come to college with background traits (e.g. race, secondary school achievement, academic aptitude, family, educational, and financial contexts). The characteristics lead to initial commitments, both to the goal of graduation from college and to the specific institution attended. These initial commitments are hypothesized as influencing academic performance and interactions that affect the student's integration. The greater the individual's integration, the greater his or her commitment to the institution and goal of college graduation. Adapted from "Dropout from Higher Education: A Theoretical Synthesis of Recent Research," by V. Tinto, 1975, *Review of Educational Research*, 45(1), pp.89-125.

Theory Integration

The Diathesis Stress Model attempts to understand why, based on pre-existing vulnerabilities, some people exhibit resilience and others develop psychopathology based on experiencing life events. Tinto's Student Integration Model (Tinto, 1975) attempts to

understand which factors contribute to a student's decision to drop out of a university based on their social and academic integration. Based on the literature and understanding of how resilience and psychopathology can affect a student's experience in higher education, these two models were integrated into one working model to understand how resilience affects retention for a student in higher education. Resilience and psychopathology were added as initial commitments, or traits that the student brought with them in his/her entry into an institution of higher education. These traits influence the way the student is able to integrate into the university, both socially and academically, which in turn, may affect their decision to drop out of the university or not. The researcher asserts that those students who exhibit resilience rather than psychopathology after experiencing an adverse traumatic experience are more likely to persist onto a second year of college.

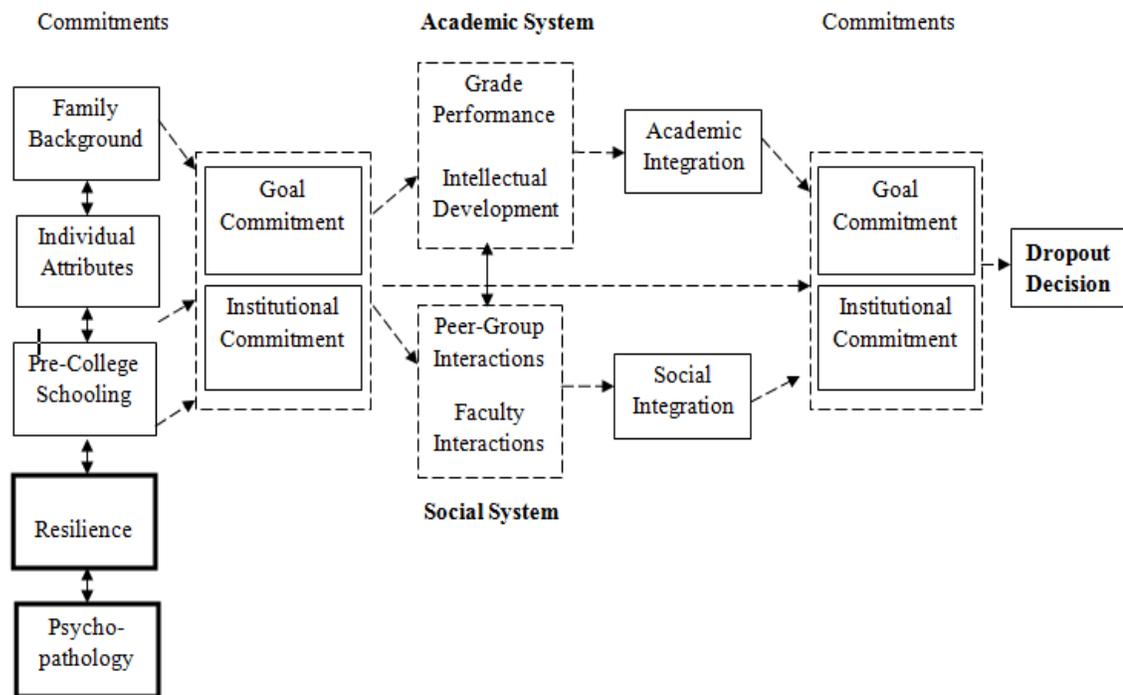


Figure 3. Tinto's Student Integration Model & Diathesis Stress Model Combined. This model was created by the researcher to include both models were integrated into one working model to understand how resilience affects retention for a student in higher education. Resilience and psychopathology from the Diathesis Stress Model were added as initial commitments in Tinto's model. These traits influence the way the student is able to integrate into the university, both socially and academically, which in turn, affects their decision to drop out of the university or not.

Problem Statement

The problem that will be addressed in this study is that there is a lack of understanding of the degree to which resiliency plays a role in determining persistence to continue onto a second year at a university among first year "at-risk" freshmen. This lack of understanding may encourage additional students to leave the university without matriculating. It may also prevent universities from employing interventions or supportive services to protect students against leaving.

Purpose Statement

The purpose of this study is to better understand if and how resilience affects retention in large urban universities. The author hopes to identify which psychosocial factors are assisting students in their pursuit to obtain a degree in a higher education institution. Resilience is the main factor of interest in this study, due to its beneficial effect on students who have experienced past traumas. It would be helpful to understand what factors, if anything, contributes to a student's decision to stay or leave an academic setting when resilience is identified.

Research Questions

- 1.) Are there differences in resilience between students who self-reported being traumatized and those who did not?

- 2.) Is there a significant relationship between resilience and the total types of trauma reported by students?
- 3.) Is there a difference in first semester grade point averages between students who self-reported a history of trauma and those who did not?
- 4.) Is there a difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not?

Significance of the Study

Student retention is one of the most studied and published topics in higher education. In addition to the extensive body of research literature that now encompasses four decades of work, there are books, journals, and conferences focused in this area (Tinto, 2006). Over 100 studies have analyzed retention problems in higher education (e.g., Bai & Pan, 2009; Brown & Robinson, 1997; Hartley, 2011; Tinto, 1975). Additionally, several other studies (e.g., Allen, 1992; Thompson & Fretz, 1991; Torres, 2003) have identified specific student populations at-risk for their failure to persist (Hartley, 2011). No other studies though have gone on further to identify psychosocial factors involved in either encouraging or preventing first year, “at-risk” college students to continue onto a second year of education. Identifying such factors, including resilience, is important to counselors as it will specifically assist college counseling centers with the ability to approach and intervene with early students who might need extra support and guidance in the first year. Understanding the effects of resilience in university students offers a more comprehensive view of human response to stress and trauma, one factor that has not been researched enough (Campbell-Sills & Stein, 2007). If

better understood, both counselors and professors would be more aware of how students' experiences shape their ability to handle and manage the collegial experience. Rather than waiting for students' mental health issues to manifest, counselors may be able to link resilience interventions to students' academic and career goals, making information useful to students in understanding the past and creating change in the future (Hartley, 2012). Additionally, counselors can use resilience interventions to increase intrapersonal resilience and better prepare students with mental health issues to graduate from college (Boutin & Wilson, 2012).

On a larger scale, universities would benefit from understanding the reasons by which students fail to persist in order to make more appropriate funding and programming decisions that would support the need for early interventions for first year students. With having fewer financial and supportive services available to students on college campuses, it is imperative to utilize the resources that the university does have, in order to make the student's academic experience both manageable and unique- both important to increase retention rates.

Summary

Chapter 1 introduced the problem being investigated and provided a rationale and purpose for the current study. Chapter 2 will review the current research literature relevant to this study. Included in Chapter 3, the methodology used in the study will be presented and rationalized. Chapter 4 will review the statistical analyses performed and the results gleaned from the data. Finally, chapter 5 will complete the dissertation with the findings and implications of this research study.

Chapter Two

Literature Review

Introduction

Chapter 2 will provide the reader with a background on the construct of resilience, including the definitions and etiological variations inherent in how researchers study resilience. Student retention in higher education will be discussed as a social problem and barrier to matriculation and graduation. A review of the scales that will be used to assess resiliency in university freshmen will be provided. The Diathesis Stress Model (e.g. Ingram & Luxton, 2005) will be identified as the theoretical model to understand how resilience and/or psychopathology develop on an individual basis when exposed to adverse traumatic events. Additionally, Tinto's Student Integration Model (1975) will be introduced to understand which factors contribute to a student's retention decision. Finally this chapter will conclude with the two models being integrated as one concept to understand how resilience and psychopathology assist or hinder university freshmen in their decision to persist or to drop out of a higher education institution.

University Freshmen Population & Retention

In the fall of 2013, a record 21.8 million students were expected to attend American colleges and universities, constituting an increase of about 6.5 million since fall of 2000 (National Center for Education Statistics, 2013). This increase is said to be the result of upward trends in the traditional college-age population coupled with rising enrollment rates. For example, the National Center for Education Statistics found that between 2000 and 2011, the 18-to-24-year-old population rose from approximately 27.3

million to approximately 31.1 million. The percentage of 18-to-24-year-olds enrolled in college also was higher in 2011 (42.0%), than in 2000 (35.5%). In the fall of 2013, these traditional college age-students were joined by around 87 million older students ages 25 and over, a group that also experienced an increase between 2000 and 2011 (National Center for Education Statistics, 2013). Despite an increasing amount of students enrolling in universities, graduation rates are below 50% and approximately 22% of first year college students at public degree granting institutions in the United States do not return for their sophomore year (American College Test (ACT), 2011). While about 35% of the total number of non-returning students depart a university because of academic reasons, the other 65% leave a university for non-academic reasons (ACT, 2011). Some students even leave for other universities, driving a competitive spirit between universities to retain students. The ACT website also found that 13% of graduates who enrolled in 2010 left and transferred to another university within the four years it took to graduate (ACT, 2011). So while there are multiple reasons why a student might leave a university, the research indicates that students are failing to persist onto a second year of college. The next session will begin to understand which factors puts a student “at-risk” to drop-out, in addition to factors that may protect a student’s success upon transition into university life.

Risk Factors for Low Retention. Students leave universities for a variety of reasons, including: academic difficulty, adjustment problems, uncertain goals, lack of commitment, inadequate finances, lack of student involvement, poor fit, and/or mental health issues (Tinto, 2011). Researchers have examined students’ adjustment to college, that is, why some students make the transition successfully, whereas others struggle or

leave school after only a short time (see, for example, Ezezek, 1994; Morrow & Ackerman, 2012). The effort of the university, its administration, and the student him/herself, to support the student through this transition must draw upon a thorough understanding of the variables that place the student “at-risk” for a stressful transition. Three of the established risk factors include: experiencing a trauma (e.g., Banyard & Cantor, 2004); poor academic preparation and performance (e.g., Cejda & Rewey, 1998; Wessell, Engle, & Smidchens, 1978); and low perceptions of social support (e.g., Sparkman, Maulding, & Roberts, 2012).

One risk factor found frequently in the literature that puts a student “at-risk” for a stressful transition is having survived a trauma (Banyard & Cantor, 2004). The *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, (DSM-5; American Psychiatric Association, 2013) specifically defines *trauma* as “a direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person” (p. 271). Many college students arrive to campus with a history of exposure to traumatic events, with childhood traumas, such as abuse, having been linked to an increased likelihood of dropping out of college (e.g., Duncan, 2000), depression (e.g., Wagnild & Young, 1993; Turner & Butler, 2003), and suicide (e.g., Bridgeland, Duane, & Stewart, 2001). Students come to college with these traumas and limit their willingness to share these experiences at times, especially to those who could be of assistance (i.e. counseling center, support services). When a traumatic experience surfaces and academic or personal issues arise as a result, the student either

reverts back to previously learned coping skills or does not cope at all and simply drops out (Banyard & Cantor, 2004). It is difficult to know if, when, or how a traumatic reaction will occur; however, according to Banyard and Cantor, students who have been through a trauma are at more risk for a failure to persist than those without a past trauma.

Poor academic preparation and performance also endanger a student's persistence onto another year in college (e.g. Brown & Robinson, 1997; Cejda & Rewey, 1998; Wessell, Engle, & Smidchens, 1978). When examining student retention, a common practice is to predict student retention status or cumulative grade average, which typically involves cognitive and non-cognitive factors. With cognitive factors, several empirical studies found that high school grade point averages and standardized aptitude scores were significant predictors of academic success at the post-secondary level (e.g., Harackiewicz, Barron, Tauer, & Elliot, 2002; Murtaugh, Burns, & Schuster, 1999). Cejda and Rewey (1998) in their study about the effect of academic factors on transfer student persistence found a similar correlation. In addition to academic performance measured by grade point average (GPA), goals and planning about education were also indicative of a student's success. Wessell, Engle, & Smidchens (1978) claimed that students who made relatively early decisions of educational goals persisted more in school as compared to those who delayed their academic planning. Brown and Robinson (1997) completed a similar analysis two decades later and found that academic preparation and aspirations, academic performance, and interactions with faculty and staff could differentiate between those who persisted and those who did not persist in school.

Additionally, students who do not feel connected to a university through social support or integration express low satisfaction in this area (e.g., Reason, Terenzini, & Domingo, 2007; Sparkman, Maulding, & Roberts, 2012; Tinto, 1993). Filkins and Doyle (2002), in a study of 1,910 students at six urban institutions, found that students' ratings of institutional support were the strongest predictors of gains in social and personal development. In other words, students who had experienced improvements in their development while in the academic setting expressed a strong connection to their university. Additionally, Pascarella and Terenzini (2005) found that both in-classroom and out-of-classroom activities affect students' social and personal competence; therefore, both academic and extracurricular opportunities assist in a student's development. In these activities, students' developed higher-order cognitive skills, were able to integrate knowledge across academic areas, and understood the importance of reflection in the learning process.

Lack of integration at a university was also discussed as a risk factor for some students in making persistence decisions. To help university administrators understand how students go about making these difficult decisions, Vincent Tinto created the Student Integration Model (1975) which is an explanatory, longitudinal model of the persistence/withdrawal process. This model is based largely on the degree of fit between the individual student and institutional environment. It depicts the dropout process that has the concepts of academic and social integration within the institution. Tinto (1993) believed that the level of integration is inversely related to the potential that a student will drop out. In other words, the more a student integrates, the less likely the student is to

drop out. Tinto's model originally noted that integration of a student both academically and socially were indicators of his or her ability to persist in college. To be successful in the pursuit of a degree, students need to achieve a level of commitment to their career, academic goals, and the institution (Tinto, 1993); as, without this integration, the failure to persist is likely.

In general, a student who has had a previous trauma, was poorly prepared or who has not performed well thus far, or who has not integrated into university culture is in danger of being retained by a higher education institution. While there are other factors to consider, it is incumbent upon universities to identify these factors in students during their first year in effort to improve retention into the second year.

Protective Factors. Just as there are risk factors that increase the likelihood that a student will not be retained onto a second year in college, there are also protective factors that improve or shield them from the adjustment of college life (Banyard & Cantor, 2004). Protective factors include the use of coping skills, stable family of origin, less severe forms of trauma, positive social supports, and an internal locus of control (Banyard & Cantor). In their study to understand resilience among college trauma survivors, Banyard and Cantor, found that internal locus of control, higher levels of social support, and meaning making about traumatic events were linked to more positive adjustment. They also concluded people who demonstrated greater levels of secure attachment to both family and friends, and who perceive social support to be beneficial at greater levels, were more resilient as they entered college. Due to the increase in stress for most college students, social support is a major buffer of this stress, which was found

to be a necessary component of a successful transition (Arthur, 1998). Arthur acknowledged that it is likely that during times of increased stress associated with the transition, that social support is a useful way to insulate the individual from the harmful impact of stress. Counseling center outreach and inclusive student activities may be ways of encouraging students to attain and utilize support during this transition phase.

Social support is essential; however, having a stable family of origin and parental support were influential variables as well. Several researchers have demonstrated that parent-child relationships characterized by authoritative parenting (e.g., Steinberg, Lamborn, Dornbusch, & Darling, 1992; Wintre & Yaffe, 2000) and parental support (e.g., Cutrona, Cole, Colangelo, Assouline, & Russell, 1994) were associated with positive outcomes. These included adolescent high school success, higher academic achievement, self-esteem, self-reliance, social competence, less depression, and better adjustment. Wintre and Yaffe extended the findings of the beneficial associations of authoritative parenting beyond high school. They found that this parenting style had a positive, indirect relationship with adjustment to a university that was mediated by current relationships with parents and psychological well-being. So from clear goals, internal control, and social supports, there are positive predictors of success documented in the literature that universities can draw upon in their retention efforts.

Active coping has also been identified as a protective factor against the failure to persist onto another year of college. Coping has often been described as active or reactive (Shields, 2001). Active coping is important because, if students believe they are capable of preventing future stressors from occurring, they are more likely to approach events

with a challenge orientation (Shields). Leong, Bonz, & Zachar (1997) found an active coping style to be a strong predictor of college matriculation, while Brockelman (2009) found that active coping was a significant predictor of cumulative GPA.

Transition Model. Everyone experiences transitions at some point, whether the experiences are events or nonevents (i.e. happen or do not happen), and anticipated or unanticipated. These transitions alter our roles, relationships, routines, and assumptions about life (Schlossberg, 2011). The transition from high school to college is one such experience that alters the student as friends change, the living environment and associated freedoms change, roles change, and daily routines change on a frequent basis. Nancy Schlossberg developed *The Transition Model* to understand the complexity of how individuals experience changes in their life. “The transition framework is designed to depict the extraordinarily complex reality that accompanies and defines the human capacity to cope with change” (Schlossberg, Waters, & Goodman, 2006, p. 55). Both applicable for career changes and life transitions (i.e. going away to college), The Transition Model includes (a) understanding transitions, (b) coping with transitions, and (c) application of the model.

Schlossberg (2011) found that the first step in dealing with change requires understanding of the different types of transitions. *Anticipated transitions* can be those considered “major life events” that we usually expect, such as graduating from high school or college, getting married, becoming a parent, starting a first job, changing careers, or retiring. At the other end of the continuum, *unanticipated transitions* include those events often considered “disruptive” which happen unexpectedly. Examples include

a major surgery, a serious car accident or illness, surprise promotion, or a factory closing. Finally, Schlossberg described *nonevent transitions* as those expected events that fail to occur, such as not getting married, not receiving the promotion or job you expected, or not being able to afford to retire according to your anticipated timeframe. The Transition Model underlines that “it is not the transition per se that is critical, but how much it alters one’s roles, relationships, routines, and assumptions. This explains why even desired transitions are upsetting” (Schlossberg, 2011, p. 159).

For some students, it might seem like no big deal to go off to college. The student will begin to separate from the past and move toward the new role, or teeter between the two roles for a time. Schlossberg (2011) noted that the process of coping means to leave one set of roles, relationships, routines, and assumptions and establishing new ones- a process that takes time. For some people, the process happens quickly, void of major issues, while for others coping with the change may take months and years to work through. Central to the model are four factors that influence a person’s ability to successfully cope with change: situation, self, supports, and strategies (Schlossberg, 2008). *Situation* refers to the student’s stressors, factors, and/or issues present around the time of the change. The student’s inner strength for coping with the situation is referred to as the *self*. *Supports* deals with the support available at the time of the transition, which is an essential part of the student’s overall well being. Finally, strategies refer to all of the student’s flexible attempts to work through the transition (i.e. coping skills).

The strategies needed to help a student work through their transition from high school to an institution of higher education will vary depending on whether the student is

moving in, through, or out of the transition. For example, a brand new student needs help to “learn the ropes” (e.g. mentorship on time management, getting a feel for the campus, learn socially acceptable norms for campus life). First year orientation programs, mentorship programs, and resident advisors are utilized by universities as a “socializing agent” to help new students learn the informal as well as formal climate (Schlossberg, 2011). A plateaued student may need help to “hang in there” or revitalize during final exams or between semesters. These students become restless and need new support to renew or restore their transition. For other students, either remaining engaged through coursework, employment, or extracurricular activities keeps them encouraged to continue through the transition (i.e. persistence or matriculation), while others feel that leaving the situation will fix the problem (i.e. drop out). Regardless of the outcome, The Transition Model provides the structure for analyzing the major transition from high school to college. Understanding the type of transitions experienced by first year university freshmen, the degree to which the student’s life has been altered, where the student is in the transition process, and the resources available to the student to be successful, all should be considered by university administrators in attempt to retain students.

Retention Efforts. While students do leave universities for other universities, research has been conducted to identify those factors that are likely to retain students at their original institution. Environmental stressors are one area to consider in terms of retention. At the environmental level, studies (e.g., Berger, 2000; Tinto, 2006b; Upcraft, Gardner, & Barefoot, 2005) suggest that organizational behaviors, including the institution’s budget, academic support, student services, institutional support, and

financial aid significantly contributed to student retention rates. While others (e.g., Ethington, 1990; Morrow & Ackerman, 2012; Parker, Hogan, Eastabrook, Oke, & Wood, 2006), focused on factors that affect retention at the individual level, including psychological factors, student demographics, and attitudes towards school. Parker et al. specifically related student retention to the individual's social and emotional competencies, meaning retention improved for those students who had appropriate social skills and a high emotional intelligence.

Based on these theories as to why students leave a university, researchers and institutions have made various efforts to implement strategies to improve retention (Tinto, 2006b). In practice, higher education institutions acknowledged the need for additional support to increase student retention rates, particularly in the first year (Gong, 2005). Some institutions are making more of an effort to reinforce general orientation programs or offer specific intervention programs through campus activities or campus counseling centers to improve retention.

Orientation and retention-focused programming aim to improve retention, yet they each require financial support to continue. The ongoing issue of budget cuts lends itself to universities having fewer resources by which to operate at a minimum level. Despite there being evidence that special interventions are necessary at the beginning of a student's experiences with higher education, money is still a forefront concern for colleges and universities across the country (Bai & Pan, 2009). They also suggest that higher education institutions can save money and time by having smaller, audience-specific intervention programs, rather than the bigger orientation programs for more

general students. Narrowing the options and focusing on specific populations may be the answer for both issues, to use less money to keep people at the university. Regardless of the options, the programs would not be successful if the needs of the students involved were either unknown or inaccurately addressed.

Resilience

The educational environment has proven to be an indicator when it comes to determining the degree to which a student feels comfortable and will remain at a university; however, there have been researchers (e. g., Morrow & Ackerman, 2012; Parker, Hogan, Eastabrook, Oke, & Wood, 2006; Sparkman, Maulding, & Roberts, 2012) who explain retention as a function of students' emotional and social needs. For example, Parker et al. (2006) found that students' psychological stability is challenged during the transition to a new school, which can either be helpful or harmful for the student. Some students cannot handle the mental strain of moving, making new friends, managing a large class load, along with extracurricular opportunities and decide that something has to be let go, namely going to school. This is when resiliency becomes a deciding factor for many students. Is the student able to overcome adversities and thrive in a new environment? Does the student possess innate qualities that protect them from change and provide them with flexibility and perseverance? Research over the past few decades has described resilience as a multidimensional characteristic that varies from person to person; It manifests uniquely through individuals based on circumstance, context, time, age, gender, and cultural origin (e. g., Connor & Davidson, 2003; Garmezy, 1985; Werner & Smith, 1992). There is a growing shift within the field of counseling to focus more on

health promotion and wellness, rather than on pathology and problem-oriented treatment (e.g., Seligman & Csikszentmihalyi, 2000; Wagnild, 2009). Due to this change in the field, a better understanding of the history of the term resilience, including factors that contribute to the individual experience, is warranted.

History of the Term “Resilience.” Throughout the course of a lifetime, most people are exposed to at least one violent or threatening situation (i.e. death of loved one, accident, abuse), defined using the DSM-5 criteria of an event outside the range of normal human experience (Ozer, Best, Lipsey, & Weiss, 2003). Though most are confronted with a troubling situation, not everyone copes the same way. Some people experience acute distress from which they are unable to recover and others suffer less intensely for a shorter duration (Bonanno, 2004). Block and Kremen (1996) described this continuum from high levels to lowered levels of recovery based on their perception of how quickly one recovers and to what extent or intensity they experienced the trauma. The continuum of resilience depicts highly resilient people having more appropriate and flexible self-regulation techniques as opposed to people with lowered resilience that tend to become rigid and over regulate (Block & Kremen). So, when faced with adversity, crisis, or an otherwise traumatic experience, a person’s resiliency is demonstrated through their recovery, or how well they were able to come out of such an experience. In spite of the continuum of recovery, there are a large number of people who manage to endure difficult situations remarkably well with little disruption to their ability to maintain relationships- A group of people who can be described as “resilient,” meaning that the individual is able to retain or maintain a stable equilibrium (Bonanno, 2004).

Investigation into the term resilience began during the 1970s by a group of researchers focused on understanding adjustment and resilience in children at risk for psychopathology and problems in development due to genetic or experiential circumstances (e.g., Garmezy, 1985; Rutter, 1987; Werner, 1982, 1984). To define resilience further, it is necessary to understand the concept of adjustment. “The term adjustment... is a layperson’s way of saying that an individual is getting along or not getting along in the world as it is” (Block & Kremen, 1996, p. 349). Resilience, then, is the result of either poor or strong adjustment. There are two opposing schools of thought represented in the literature that have operationally defined the construct of resilience as either a personality trait (or cluster of traits) (e.g., Block & Kremen, 1996; Waugh, Fredrickson, and Taylor, 2008) or as a dynamic process of personal, interpersonal, and protective factors, resulting in an abnormally positive outcome in the face of adversity (e.g., Greene, 2007, 2010; Luthar & Cicchetti, 2000; Smith-Osborne, 2007; Werner, 1982).

In one corner, a process approach to resilience has been identified. Luthar and Cicchetti (2000) defined resilience as “a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma” (p.585). They understand resiliency to be a two-dimensional construct that implies both the exposure to adversity and the manifestation of positive adjustment outcomes in an individual; therefore, a process rather than a trait. Luthar and Cicchetti argued that resilience does not represent a personality trait or an attribute of the individual, rather resilience is discussed in terms of protective factors that foster the development of positive outcomes

and health personality characteristics among those who have been exposed to unfavorable or aversive life circumstances.

However, in the opposite corner, Block and Kremen (1996) described resilience as a trait, also known as ego resiliency. This trait refers to an individual characteristic reflecting resourcefulness, sturdiness of character, and flexibility of functioning in response to varying conditions. Block and Kremen identified ego resiliency as trait resilience, that is, the ability to dynamically and appropriately self-regulate that allows highly resilient people to adapt more quickly to changing circumstances. Describing resilience as a trait rather than a process, allows for the reflection and acceptance of unique differences among people that may be present from as early as birth. Waugh, Fredrickson, and Taylor (2008) argued that although most individuals may exhibit resilient behavior at one time or another, treating resilience as a trait accounts for significant individual differences in the capacity to adapt in the face of trauma and stress.

Regardless of the specific verbiage used to describe the construct of resilience, several researchers (see, for example, Garmezy, 1985; Rutter, 1987; Seligman & Csikszentmihalyi, 2000; Werner, 1984) would agree that resilience is a multidimensional characteristic that varies with context, time, age, gender, and cultural origin, as well as within an individual subjected to different life circumstances. Specifically, Seligman and Csikszentmihalyi, encouraged the use of the term *resilience* because it addresses mental wellness rather than mental illness, a term with a negative connotation. Historically, health care interventions have used a model grounded in pathology, which emphasizes deficits and fixing problems; however, Wagnild (2009) believed that focusing on

resilience challenges the health care industry to recognize strengths and build on existing capabilities. She understood resilience to represent “inner strength, competence, optimism, flexibility, and the ability to cope effectively when faced with adversity” (Wagnild, 2009, p. 105). Overall, discussing and analyzing resiliency as a positive attribute has changed the way both health care and psychology have viewed individuals in the aftermath of a stressor or trauma.

The overall construct of resilience can be further divided into its essential characteristics, identified and defined by Wagnild and Young (1993) as: purpose, perseverance, equanimity, self-reliance, and essential aloneness. According to Wagnild and Young, breaking down the construct of resilience allows individuals to make meaning out of term and to adopt or identify with the characteristics. *Purpose* is the realization that life has meaning and the recognition that there is something for which to live. *Perseverance* is a willingness to continue the struggle to reconstruct one’s life in the midst of adversity. Individuals anticipate rather than fear the future. *Equanimity* is a balanced perception of life and experiences, in which people take what comes to moderate extreme responses. *Self-reliance* is a belief in one’s personal strengths and capabilities. Those who are self-reliant can draw on past successes and guide their future actions. Finally, *essential aloneness* is the realization that each person is unique and that while some experiences can be shared, others must be faced alone (Wagnild & Young, 1993).

Additionally, Benard (2004) identified characteristics commonly found in resilient people, often referred to as protective factors. To assist resilient individuals in

being able to “bounce back” as Benard described, he identified the following four factors: 1) social competence, 2) problem-solving skills, 3) autonomy, and 4) sense of purpose. The qualities that exemplify *social competence* include responsiveness, flexibility, empathy, caring, communication skills, and sense of humor (Benard, 2004). He described that individuals who possess these abilities are able to develop relationships in both school and intimate settings. *Problem-solving skills* are often demonstrated by the ability to abstractly and reflectively think and to see alternate solutions to problems, both cognitive and social. Benard described that the ability to plan, creatively think, and utilize resources augments these skills. A *sense of identity* is indicative of a person’s autonomy. Autonomous people independently think or act to gain a sense of control over their environment and thereby separate themselves from dysfunctional family circumstances. Finally, a *sense of purpose* is noted in one who has goals, educational aspirations, persistence, hopefulness, and a sense of a bright future (Benard, 2004).

Because resilience has been defined as a process and a trait, it is necessary to clarify the definition that will be used throughout this research to understand resilience with the college student population. As a result of there being multiple characteristics and protective factors that can be found within the construct of resilience as opposed to a singular trait, for the purposes of this research, resilience will be defined as the “process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990, p. 406). Egeand, Carlson, and Sroufe (1993) described resilience as the complex interplay between an individual and his/her environment, in which the individual can influence a successful outcome by using

internal and external protective factors, defined as personal qualities or contexts that predict positive outcomes under high-risk conditions. This influence can either be minimal or very impactful, which allows for a continuum of resilience as promoted by Block & Kremen (1996).

Scales

As a result of the two opposing schools of thought represented in the literature that have operationally defined the construct of resilience as either a personality trait or as a dynamic process, there are eleven different instruments designed to measure the construct of resilience to accommodate for use with multiple populations and to assess different facets of the same construct; however, not all of them are appropriate to assess resiliency in the university student population or with those who have experienced aversive events.

The following section will 1) briefly introduce the eleven scales developed to measure resilience, 2) critique their applicability for use with a college-aged population, and finally 3) describe in thorough detail the instruments that were selected to operationally define resilience in this study.

Child & Adolescent Resiliency Scales. There are four resilience scales developed to measure resiliency in the child and adolescent population. The first is the Resilience Skills and Abilities Scale (RSAS) (Jew, Green, & Kroger, 1999), which was originally developed as the Adolescent Resiliency Belief System (Jew, 1997). The RSAS consists of 35 items rated on a 5-point Likert scale and was validated using four studies of high school students. This scale operationalizes resilience in a psychological context of

characteristics that individuals use in stressful contexts, drawing heavily on the cognitive appraisal theory of Mrazek and Mrazek (1987). The RSAS appears both reliable and valid, showing acceptable intraclass correlations indicating test-retest reliability (.36-.70) and internal consistency of (.68-.95). Additionally, the Adolescent Resilience Scale (ARS) (Oshio, Kaneko, Nagamine, & Nakaya, 2003), for youth through college-aged students, consists of 21 item scale rated on a 5-point Likert scale. It consists of three factors: novelty seeking, emotional regulation, and positive future orientation. The construct validation was completed on a Japanese population of 207 young adults between the ages of 19 and 23 (Oshio et al, 2003) and differentiated among groups who were vulnerable, resilient, and well adjusted. Internal consistency among all factors of the ARS were .72-.75 for subscales. The third scale is the Resilience Scale for Adolescents (READ) (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006). It is a 28-item scale, rated on a 5-point Likert scale. READ was validated on 425 adolescents between the ages of 13 and 15 in Norway (Hjemdal et al, 2006). The final resilience scale used with this population is the Resilience Scale for Children and Adolescents (RSCA), which was developed for use in preventative screening for psychological vulnerability (Prince-Embury, 2008). RSCA contains three scales that assess for resilience in children and adolescents: Sense of Mastery, Sense of Relatedness, and Emotional Reactivity (Prince-Embury & Courville, 2008a). Both the Sense of Mastery scale and the Emotional Reactivity scale consist of a 20-items rated on a 5-point Likert scale. The Sense of Relatedness scale consists of 24 items rated on a 5-point Likert scale. The RSCA validation consisted of normative samples of 226 children aged 9 to 11 years, 224

adolescents ages aged 12 to 14 years, 200 adolescents between 15 and 18 years, and a clinical sample of 169 adolescents between ages 15 and 18 years (Prince-Embury, 2008).

Adult Resiliency Scales. There are seven scales that measure resilience in the adult population. The Resilience Scale (RS) (Wagnild & Young, 1993) and the Conner - Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003) will be discussed at great length below. Both have sound psychometric properties and have been validated with the adult population (Wagnild & Young, 1993; Campbell-Sills & Stein, 2007). Five scales remain. As opposed to the authors of other resiliency tools, Block and Kremen (1996) focused on ego resiliency as a trait during the creation of the Ego Resiliency Scale (ER89). According to Block and Kremen, the ego resiliency trait refers to the individual's ability to dynamically and appropriately self-regulate. The ER89 is generally used as a predictor of social functioning, self-regulation, and behavioral problems. Created to identify a set of items suitable for usage in non-psychiatric contexts, the ER89 consists of 14 items, each responded to on a 4-point scale (Block & Kremen, 1996). Block and Kremen administered the scale to participants in a longitudinal study at ages 18 and 23, and reported that the ER89 has acceptable alpha reliability ($\alpha=.76$) within the sample. The test-retest reliabilities across the five years between test administrations were .67 and .51 for females and males respectively.

The second scale is the Baruth Protective Factors Inventory (BPF I) (Baruth & Caroll, 2002) consists of 16 items rated on a 5-point Likert scale, addressing four factors: adaptable personality, supportive environment, fewer stressors, and compensating experiences. The BPF I was validated on 98 undergraduate students between ages 19-74.

Internal consistency and Cronbach's alpha (.83) were found for the total scale. The authors' state that the reliability and validity of the BPF1 will need further testing, as the scale is further refined (Baruth & Carroll, 2002). The Resilience Scale for Adults (RSA) (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003) is the third resilience scale. It consists of 33-items that address six factors: positive perception of self, positive perception of future, social competence, structured style, family cohesion, and social resources. Thus, this scale operationalizes resilience in both psychological and ecological/contextual terms. The RSA was originally validated on 183 adults between the ages of 18 and 75 living in Scandinavia (Friborg et al., 2003). The internal consistency for Cronbach's Alpha of all contrast scales indicated adequate psychometric properties. Internal consistency of all subscales ranged from .67-.90 (Ahern, Kiehl, Sole, & Byers, 2006). Test-retest correlations were satisfactory for subscales ranging from .69-.84. The fifth scale to measure resilience in adults is the Brief Resilient Coping Scale (BRCS) (Sinclair & Wallston, 2004). The BRCS is a short assessment aimed at identifying one's ability to cope with stress. There are four items; the response format is a 5-point Likert scale and measures one factor, Adaptive Coping. Internal consistency for Cronbach's alpha reliability for the scale was computed for group 1 as .64 (first baseline), .76 (second baseline), .69 (end of intervention), and .71 (3-month follow-up). Cronbach's alpha reliability for the scale was computed for group 2 as 0.68. Test-retest reliability for group 1 was .71 during the baseline and 0.68 at 3 months follow-up. Finally, the sixth measure to assess resilience is The Resilience in Midlife Scale (RIM) (Ryan & Caltabiano, 2009) consists of 25-items, rated on a 5-point Likert scale and contains four factors: self-

efficacy, family/social networks, perseverance, internal locus of control, coping and adaptation. It was validated on an Australian population of 130 adults between the ages of 35-60 (Ryan & Caltabiano, 2009).

Scale Critiques. The Resilience Skills and Abilities Scale (RSAS) (Jew, Green, & Kroger, 1999), Resilience Scale for Adolescents (READ) (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006), and the Resilience Scale for Children and Adolescents (RSCA) (Prince-Embury, 2008) would not be appropriate for use with the university student population since these three scales have only been validated for children and adolescents ages 9 to 18. While the Adolescent Resilience Scale (ARS) (Oshio, Kaneko, Nagamine, & Nakaya, 2003) was validated for college-age youth, it was not validated for an American population, rather it was validated on a Japanese population of 207 young adults between the ages of 19 and 23 (Oshio et al, 2003). Thus, it would not be appropriate to use with this population.

While many of the resilience scales used with adults had sound psychometric properties, there are several scales that will not work for the purposes of this study. The ER89 (Block & Kremen, 1996) constructs resilience as a trait rather than as a process, which is inconsistent with how resilience is viewed in this research. The Baruth Protective Factors Inventory (BPF) (Baruth & Carroll, 2002) was validated on 98 undergraduate students. While it was found to be reliable (Cronbach's Alpha = .83) and valid in the initial study, subsequent research has yet to replicate the original findings and the authors state the reliability and validity will need further testing. The BPF should be validated on a larger sample and with use for multiple populations since the initial

researchers had predominantly female Hispanic and Anglo-American participants in the original validation (Smith-Osborne & Bolton, 2013). The Resilience Scale for Adults (RSA) (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003), while validated for the appropriate age group, it was not validated for the correct population. The RSA was validated for Scandinavians ages 18-75, rather than for our population of interest. Finally, the Brief Resilient Coping Scale (BRSC) (Sinclair & Wallston, 2004) similar to the ER89, meets the minimum standards for reliability and validity of a resilience instrument; however, it operationalizes resilience primarily in terms of intrapsychic traits, rather than of resilience as a process. Finally, The Resilience in Midlife Scale (RIM) (Ryan & Caltabiano, 2009) will not work to study resilience in this study due to it being validated on an Australian population of 130 adults between the ages of 35-60, rather than for an American population.

After a thorough review of which assessment measures are not appropriate for this particular population, there are three left that could be utilized for the purposes of this study. The Resilience Scale (Wagnild & Young, 1993), the Ego-Resiliency Scale (Block & Kremen, 1996), and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) have each been validated for adults and have sound psychometric properties. For this study though, resilience is defined in terms of it being a process rather than as a single trait. Because the Ego- Resiliency Scale measures resiliency as a single trait, the data collected from the measure will not be included in this study. Therefore, the two remaining assessment measures will be discussed in terms of how the construct of resiliency is defined, including strengths and weaknesses and each instrument's

associated psychometric properties will be reviewed.

The Resilience Scale (RS). The Resilience Scale (RS) (Wagnild & Young, 1993) was first published in 1993 and is the earliest published instrument designed to measure the construct of resilience. It intends to measure resilience as a positive personality characteristic that enhances individual adaptation. The RS has 25-items rated on a 7-point Likert scale measuring two factors: personal competence and acceptance of self and life. Originally developed from a 1987 qualitative study with a sample of older women who had adapted successfully following a major life event, the initial RS consisted of 50 items. After early analysis, the scale was reduced to 25 items reflecting five characteristics of resilience. It was initially available and pretested in 1988 (Wagnild & Young, 1990). The conceptual foundation for the RS involves five characteristics of resilience, including: perseverance, equanimity, meaningfulness, self-reliance, and existential aloneness. Scores range from 25-175; however, scores over 145 indicate moderately high to high resilience.

There were several small studies conducted in the early 1990s using the RS that provided the earliest data on reliability and validity. These studies included populations such as: undergraduate and graduate students, caregivers of spouses with Alzheimer's disease, first-time mothers returning to work, and residents in public housing (Wagnild & Young, 2003). During this time, the scale's Cronbach alpha coefficient was consistently acceptable and moderately high (e.g. averages between 0.73 to 0.91). The RS was further tested and validated on 810 adults between 53 and 95-years-old. The measures of validation included depression, morale, and life satisfaction. As hypothesized, resilience

was positively associated with morale and life satisfaction and negatively with depression. Wagnild and Young found that during these validation procedures, internal consistency and reliability remained acceptable (alpha coefficient= .91). Preceding its validation, numerous studies have used this instrument on individuals of all ages and ethnic backgrounds, in part due the scale being written at a 6th grade reading level.

The RS, like the other assessment measures, has both strengths and weaknesses inherent in its utility to measure resiliency. A major strength for the RS is that it is flexible and provides for multiple applications in both males and females. It also has good reliability and validity for use with populations that differ in age and ethnicity (Ahern, Kiehl, Sole, & Byers, 2006). Despite its flexibility, the RS, as an assessment measure, needs to be further studied, especially for test-retest reliability. Ahern et al, in their study reviewing instruments that measure resiliency, found multiple wording issues, namely the initial wording of items were compiled from statements from women only. They encouraged further piloting of item wording to void the measure from any other biases, including gender-specific verbiage.

Connor-Davidson Resilience Scale (CD-RISC). From a theoretical framework that defined resilience as a process rather than as a specific trait, Kathryn Connor and Jonathon Davidson described resilience as the personal qualities that enable one to thrive in the face of adversity (Connor & Davidson, 2003). They believed that stressors are always present in life and the ability to cope with these stressors is influenced by both successful and unsuccessful attempts to adapt. Connor and Davidson define the construct of resilience as a measure of successful coping ability.

Out of this definition, the Connor-Davidson Resilience Scale (CD-RISC) “was developed as a brief, self-rated assessment to help quantify resilience and as a clinical measure to assess treatment response” (Connor & Davidson, 2003, p. 77). The authors intended to create a well-validated and reliable measure to quantify resilience. They also intended to establish reference values for resilience in the general population and in clinical samples. Finally, they hoped to assess the modifiability of resilience in response to pharmacologic treatment in a clinical population (Connor & Davidson). The CD-RISC contains 25 items that assess how a subject has felt over the past month; it utilizes a 5-point Likert scale with a range of responses, including: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). Scores are determined by summing each item, with total scores ranging from 0 to 100. According to Connor and Davidson, higher scores on the scale reflect greater resilience. The scale addresses five factors: personal competence, high standards, and tenacity; trust in one’s instinct; tolerance of negative effects, and strengthening effects; positive acceptance of change and secure relationships; control; and spiritual influences. The validation sample of the CD-RISC consisted of several populations (e.g. general population, primary care, psychiatric outpatients, generalized anxiety disorder, and PTSD) with a total of 827 participants (Connor & Davidson, 2003).

The CD-RISC has been shown to have adequate internal consistency ($\alpha=.89$), and its test-retest reliability (coefficient of .87) and convergent and discriminant validity have also been supported (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003). The CD-RISC is reported to have utility in both clinical and research settings. The use of the CD-

RISC shows that resilience is quantifiable, modifiable, and can improve with treatment. It also shows that improvement in resilience is linked to overall improvement in functioning (Connor & Davidson; Khoshouei, 2009). Other studies using shortened and/or modified versions of the CD-RISC (both involving undergraduate students) have also reported sound test-retest reliability, convergent validity, and divergent validity rates (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003).

Strengths of using the CD-RISC to measure resiliency include its applicability to multiple populations and sound psychometric properties. Ahern et al. (2006) found it beneficial that this assessment was tested both in general populations and in clinical samples, as this makes it easier to generalize findings and promote its use in a variety of settings. They also deemed CD-RISC's good internal consistency and test-retest reliability as strengths that propel the test above others when measuring resiliency as a construct. The CD-RISC assesses characteristics of resilience; however, it does not assess the resiliency process, which is a weakness of the scale. Ahern et al also found that the CD-RISC lacks an appropriate amount of administration procedures and does not provide detailed scoring procedures (i.e. lacks definite cut-off numbers). Despite this finding, the instrument's highly studied and recorded psychometric properties outweigh the limited description of the procedures and scoring procedures.

Diathesis Stress Model

The Diathesis Stress Model (e.g. Ingram & Luxton, 2005) will serve as the basic theoretical framework for this study. Eberhart and Hammen (2010) identify the Diathesis-Stress Model as a psychological theory which explains that pre-existing vulnerabilities

sometimes lead to the development of psychopathology. Another definition from Belsky and Pluess (2009) concludes that “some individuals, due to a “vulnerability in their make-up- which may be behavioral/temperamental in character (e.g., difficult temperament), physiological or endophenotypic in nature (e.g., highly physiologically reactive), environmental, or genetic in origin- are disproportionately or even exclusively likely to be affected adversely by an environmental stressor,” (pp. 885). Examples of stressors may be child maltreatment, limited access to healthcare and education, insensitive parenting, or untimely accident/injury to name a few.

The diathesis, or a predisposition to something, interacts with the related stress response of the individual (Belsky & Pluess, 2009). This concept has been used in the fields of medicine and psychiatry dating back to the 1800s; however, it was not used to understand psychopathology until the 1960s. The stress model is useful in making sense of the interplay of the environment (i.e. nature versus nurture debate) in how susceptible a client is to developing a psychological disorder through the lifespan. It assists in identifying and explaining why some people are more at-risk for developing a disorder as well (Eberhart & Hammen, 2010).

While the Diathesis Stress Model significantly aids our understanding of vulnerability to depressive symptoms that disorders through their examination of how environmental stressors differentially impact individuals with varying degrees of vulnerability, the model does have some limitations. Specifically, this type of model does not explicitly address how individuals affect their environments by shaping the stressors they experience (Hammen, 1991). Additionally, there is a great deal about depression;

however, there is limited research on the Diathesis Stress Model and other mental health disorders. Regardless, a better understanding of the needs of students identified as having or not having a past trauma is necessary to provide a more appropriate emphasis on to what will improve adjustment past these issues and into a successful academic journey.

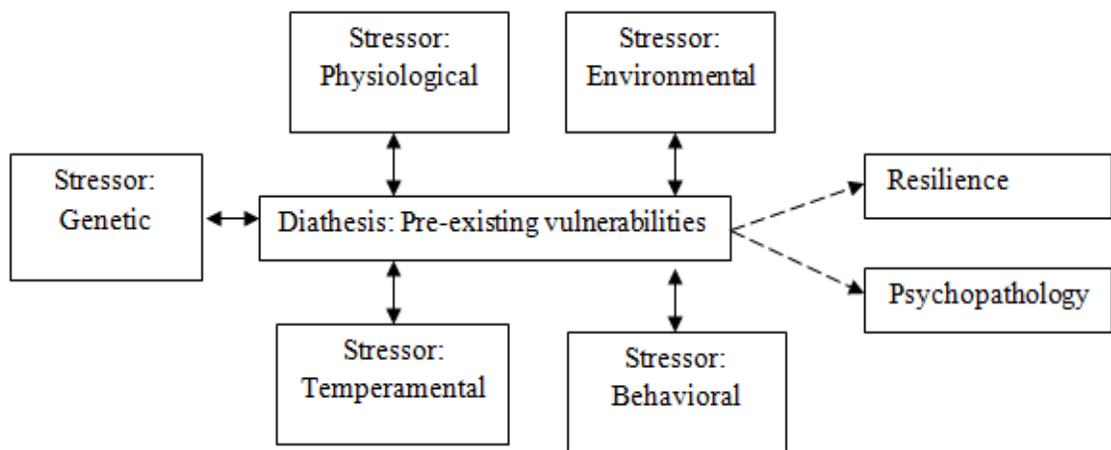


Figure 1. Diathesis Stress Model. The diathesis, or a predisposition to something, interacts with the related stress response of the individual. Pre-existing vulnerabilities could be behavioral/temperamental in character (e.g., difficult temperament), physiological or endophenotypic in nature (e.g. highly physiologically reactive), environmental, or genetic in origin.

Tinto's Student Integration Model

Vince Tinto (1987, 1993, and 1994) developed an explanatory, longitudinal model of the persistence/withdrawal process, known as the Student Integration Model, which is based largely on the degree of fit between the individual student and institutional environment. The three general facets of this model include: (a) students enter college with different levels of academic preparation and attributes; (b) they develop different levels of integration into an institution's academic social system, including grades and attitudes about their academic progress; and (c) they develop different levels of

integration into an institution's social system, including how they interact with peers through formal, semi-formal, and informal instances. Tinto proposed that if academic and social integration are positive, commitment and motivation to persist in attaining a degree are enhanced, and high levels of either type of integration might offset low levels of the other type for determining persistence.

Tinto (1975) believed that students who persisted in college had different reasons for attending college compared to those who did not persist. For example, students who attended college to seek more vocational training tended to leave the institution unsuccessful compared to those students who attend college in order to gain more knowledge or prepare for a professional career. In a longitudinal study with undergraduate students at Syracuse University, Terenzini and Pascarella (1977) found a statistically significant difference between “stayers” and “leavers” with pre-college enrollment expectations of nonacademic life. More specifically, faculty interactions and positive perceptions of the academic program accounted for nearly 9% of the student’s attrition status. For those students who lived at home and commuted to the institution, one of the only opportunities to develop these relationships with peers and faculty occurred. These classroom interactions and teaching practices tended to enhance student retention. Tinto’s model originally noted that integration of a student both academically and socially were indicators of his or her ability to persist. To be successful in the pursuit of a degree, students need to achieve a level of commitment to their career, academic goals, and the institution (Tinto); without this integration, the failure to persist is likely. Tinto eventually expanded his model of integration to include stages such as separation,

transition, adjustment, difficulty, incongruence, isolation, incorporation, finances, learning, and external obligations for commitments. While Tinto's model has increased understanding about integration and persistence, one of the weaknesses of the model, is its inability to predict potential dropouts at an early stage (Webb, 1988), thus, it has not assisted counselors and other administrators in implementing early intervention strategies. Because the researcher used pre-collected data for this research study, the inclusion of data regarding the perceptions of students about their "fit" at the university was not gathered. As a result, there are select parts of the Tinto Student Integration Model that could be utilized.

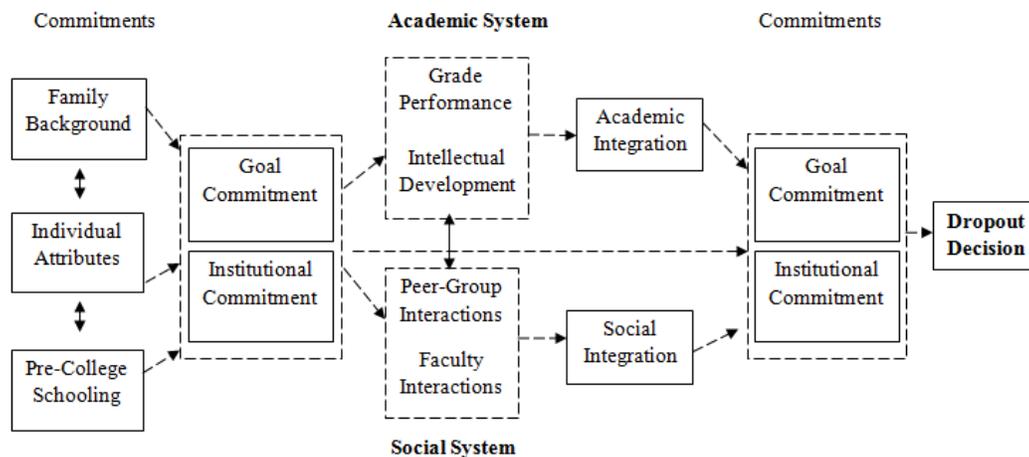


Figure 2. Tinto's Student Integration Model (Tinto, 1975). The model suggests that students come to college with background traits (e.g. race, secondary school achievement, academic aptitude, family educational, and financial contexts). The characteristics lead to initial commitments, both to the goal of graduation from college and to the specific institution attended. These initial commitments are hypothesized as influencing academic performance and interactions that affect the student's integration. The greater the individual's integration, the greater his or her commitment to the institution and goal of college graduation. Adapted from "Dropout from Higher Education: A Theoretical Synthesis of Recent Research," by V. Tinto, 1975, *Review of Educational Research*, 45(1), pp.89-125.

Theory Integration

The researchers chose to integrate the two models described above into one cohesive model to depict how resilience should be a factor to consider in understanding how students integrate and make decisions about their persistence on to another year or to drop out of a university (See Figure 3). The Diathesis Stress Model attempts to understand why, based on pre-existing vulnerabilities events (i.e. genetic, environmental, behavioral/temperamental, and physiological), some people exhibit resilience and others develop psychopathology based on experiencing life events (i.e. abuse, poor parenting, inherited traits, untimely accident/injury/death etc.). Tinto's Student Integration Model (Tinto, 1975) attempts to understand which factors contribute to a student's decision to drop out of a university based on their levels of social and academic integration. The goal in integrating the two models was to understand how resilience and psychopathology can affect a student's experience in higher education. The integrated model then assists the researchers to answer the research questions to better understand how resilience affects retention for a student in higher education. Resilience and psychopathology were added as initial commitments, or traits that the student brought with them in his/her entry into an institution of higher education. These traits influence the way the student is able to integrate into the university, both socially and academically, which in turn, affects their decision to drop out of the university or not. The researcher asserts that those students who exhibit resilience rather than psychopathology after experiencing an adverse

traumatic experience are more likely to persist onto a second year of college.

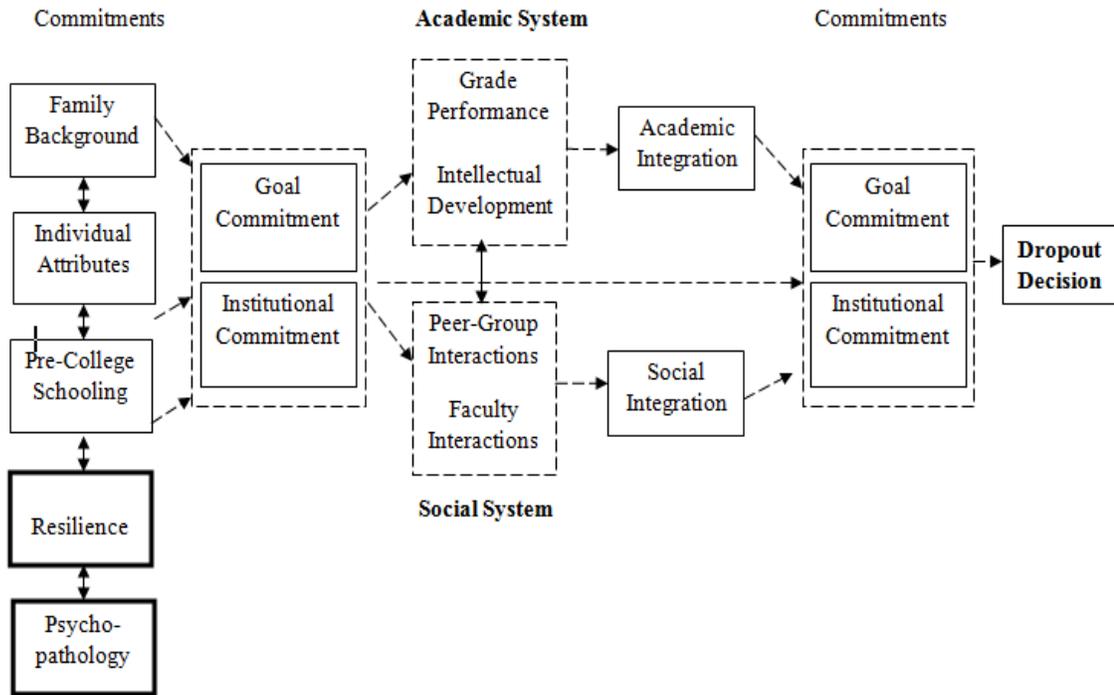


Figure 3. Tinto's Student Integration Model & Diathesis Stress Model Combined. This model was created by the researcher to include both models integrated into one working model to understand how resilience affects retention for students in higher education. Resilience and psychopathology from the Diathesis Stress Model were added as initial commitments in Tinto's model. These traits influence the way the student is able to integrate into the university, both socially and academically, which in turn, may affect their decision to drop out of the university or not.

Summary

This chapter provided information on how student retention of university freshmen can be influenced, in part, by resilience of those who have experienced aversive traumatic events. The population was defined and the importance of the study was addressed in relation to retention statistics with university freshmen students. A thorough review of the construct of resilience was provided to include resilience as a set of characteristics, or a process of bouncing back from adverse life experiences. Overviews

of developmental traumas were provided to understand which environmental stressors students bring with them to university life. Finally, an integration of the Diathesis Stress Model and Tinto's Student Integration Model were described in detail and discussed as the theoretical basis of the study.

Chapter Three

Methods

Introduction

Chapter 3 will provide a brief background on retention for first year university students and the role resilience plays in determining university students' motivation to persist. Chapter 3 will then address the research questions being investigated in this study, followed by the research design. Information on the research sample, the instruments utilized, and the procedures for conducting the study will also be included in Chapter 3. Additionally, research hypotheses and an explanation of how the data will be analyzed will be provided. Chapter 3 will conclude with a review of potential ethical considerations involved in this study. The data used in this study was collected in 2009. At that time, two assessment scales analyzing resiliency (See Appendices C and D) and one demographic questionnaire (See Appendix B) were distributed to first year freshmen at a large urban university in Ohio within their first year experience class, which is a mandatory class for all first year students. An ex post facto research design will be used to understand if and how resiliency, as a psychosocial factor, plays a role in a first year at-risk college student's attempt to persist onto a second year of education.

Research Questions

1. Are there differences in resilience between students who self-reported being traumatized and those who did not?

2. Is there a significant relationship between resilience and the total types of trauma reported by students?
3. Is there a difference in first semester grade point averages between students who self-reported a history of trauma and those who did not?
4. Is there a difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not?

Research Design

For this study, the researcher will use an ex post facto research design. Ex post facto literally means “from what is done afterwards” (Cohen, Manion, and Morison, 2000). This type of research is ideal for conducting social research when it is not possible or acceptable to manipulate the characteristics of human participants, such as in this case, when participants cannot be ethically subjected to experience aversive traumatic events while others do not. It is the substitute for true experimental research and can be used to test hypothesis about cause-and-effect or correlational relationships, where it is not practical or ethical to apply a true experimental, or even a quasi-experimental design (Cohen, Manion, & Morison, 2000). Kerlinger and Rint (1986) explained that in the context of social science research, an ex post facto investigation seeks to reveal possible relationships by observing an existing condition and searching back in time for plausible contributing factors.

Ex post facto research can be viewed as an experimental research in reverse. Cohen, Manion, & Morison (2000) noted that instead of taking groups that are equivalent and subjecting them to different treatments to determine differences in the dependent

variables, an ex post facto experiment begins with groups that are already different in some respect and searches in retrospect for factors that brought about those differences. This type of research is a method of teasing possible antecedents of events that have happened but cannot be manipulated by the investigator (Kerlinger & Rint, 1986). In this study, the developmental traumas are teased out to better understand the presence of resilience, a process that cannot be manipulated by the researcher.

The ex post facto design is the best choice to answer the research questions of this study. The research question asks: “is there a relationship between resilience and first year university freshmen’ academic outcomes among traumatized students?” In this case, the ex post factor study will be conducted to determine if students who have experienced an aversive traumatic event and exhibit resilience have better academic outcomes (i.e. enrollment & GPA) than those who have not experienced aversive traumatic events. If an investigation reveals that academic outcomes are better among those with resilience after experiencing a traumatic event, the investigator could hypothesize that outcomes improve among those who exhibit resilience. The researcher is thus examining the effects of a naturally occurring event on the subsequent outcome with a view of establishing a correlational link between them.

There are both strengths and weaknesses to using an ex post facto research design. Some major advantages of conducting this type of study are that the data are already collected, obtaining permission to conduct the study is less involved than enrolling participants, and less time is involved in conducting the study than by creating new data (Kerlinger & Rint, 1986). A weakness of this type of design is that there is not random

assignment to treatment, as in an experimental study, so there could be inherent confounds in the variables studied (Cohen, Manion, & Morison, 2000). Additionally, the sample cannot be considered random, so generalization is limited. Finally, there is often little information about any dropouts from the study. This type of design is appropriate in instances where a more powerful experimental method is not possible (i.e. when it is not possible to select, control, and manipulate the factors for a cause-and-effect type of study). Cohen, Manion, & Morison also suggest that the ex post facto design is particularly useful in social, educational, and psychological studies when the independent variable is outside of the researcher's control, such in this case of understanding how particular traumas or major life stressors in a student's life either motivates their persistence to continue in higher education or increases the urge to drop out. Understanding the role of resilience in retention efforts will clarify how administrators and faculty can intervene to keep students enrolled and successful in school. The predictor variable in this study is trauma history. The criterion variable is academic outcomes (i.e. enrollment and GPA). The covariate in this study is resiliency.

Instruments

There are two opposing streams of research that have operationally defined the construct of resilience as either a personality trait (or cluster of traits) or as a dynamic process of personal, interpersonal, and protective factors, resulting in an abnormally positive outcome in the face of adversity (see, for example, Block & Kremen, 1996; Smith-Osborne, 2007; Werner, 1982). There are a number of instruments designed to operationally define the construct of resilience to accommodate for use with multiple

populations and to assess different facets of the same construct; however, not all of them are appropriate to assess resilience of adults or university students. This particular data set was used because it used The Resilience Scale (Wagnild & Young, 1993) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), both which had been validated for adults (i.e. college students) and had sound psychometric properties. The original data set included the use of the Ego-Resiliency Scale (Block & Kremen, 1996); however, the researchers chose not to use this section of the data because it identifies resilience as a “trait” rather than a process. Since the researchers have defined resilience as a process, the data from the Ego-Resiliency scale would not match and consequently was not included for this study. Left with the following two scales: Resilience Scale (Wagnild & Young, 1993) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), these assessment measures will be discussed in terms of how the construct of resiliency is defined and a review of each instrument’s associated psychometric properties will be discussed.

The Resilience Scale. The Resilience Scale (RS) (Wagnild & Young, 1993) was first published in 1993 and is the earliest published instrument designed to measure the construct of resilience. The RS is a 25-item scale rated on a 7-point Likert scale measuring two factors: personal competence and acceptance of self and life. Scores range from 25-175; however, scores over 145 indicate moderately high to high resilience. There were several small studies conducted in the early 1990s using the RS that provided the earliest data on reliability and validity (Wagnild & Young, 2003). During this time, the scale’s Cronbach alpha coefficient was consistently acceptable and moderately high (e.g.

averages between 0.73 to 0.91). The RS was further tested and validated on 810 adults between 53 and 95-years-old, almost half of which were male (48%). Wagnild and Young found that during these validation procedures, internal consistency and reliability remained acceptable (alpha coefficient= .91).

The RS, like the other assessment measures, has both strengths and weaknesses inherent in its utility to measure resiliency. A major strength for the RS is that it is flexible and provides for multiple applications in both males and females. It also has good reliability and validity for use with populations that differ in age and ethnicity (Ahern, Kiehl, Sole, & Byers, 2006). Despite its flexibility, the RS, as an assessment measure, needs to be further studied, especially for test-retest reliability. Ahern et al, in their study reviewing instruments that measure resiliency, found multiple wording issues, namely the initial wording of items were compiled from statements from women only. They encouraged further piloting of item wording to void the measure from any other biases, including gender-specific verbiage.

Connor-Davidson Resilience Scale. From a theoretical framework that defined resilience as a process rather than as a specific trait, Kathryn Connor and Jonathon Davidson described resilience as the personal qualities that enable one to thrive in the face of adversity (Connor & Davidson, 2003). They believed that stressors are always present in life and the ability to cope with these stressors is influenced by both successful and unsuccessful attempts to adapt. The construct of resilience is thus a measure of successful coping ability.

Out of this definition, the Connor-Davidson Resilience Scale (CD-RISC) was developed as a brief, self-rated assessment to help quantify resilience and to assess treatment response (Connor & Davidson, 2003). The CD-RISC contains 25 items that assess how a subject has felt over the past month and utilizes a 5-point Likert scale. Scores are determined by summing each item, with total scores ranging from 0 to 100. According to Connor and Davidson, higher scores on the scale reflect greater resilience. Connor and Davidson reported the validation sample of the CD-RISC consisted of several populations (e.g. general population, primary care, psychiatric outpatients, generalized anxiety disorder, and PTSD) with a total of 827 participants. The CD-RISC has been shown to have adequate internal consistency ($\alpha=.89$), and its test-retest reliability (coefficient of .87) and convergent and discriminant validity have also been supported (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003). The CD-RISC is reported to have utility in both clinical and research settings.

Strengths of using the CD-RISC to measure resiliency include its applicability to multiple populations and sound psychometric properties. Ahern et al. (2006) found it beneficial that this assessment was tested both in general populations and in clinical samples, as this makes it easier to generalize findings and promote its use in a variety of settings. They also deemed CD-RISC's good internal consistency and test-retest reliability as strengths that propel the test above others when measuring resiliency as a construct. The CD-RISC assesses characteristics of resilience; however, it does not assess the resiliency process, which is a weakness of the scale. Ahern et al. (2006) also found that the CD-RISC lacks an appropriate amount of administration procedures and does not

provide adequate or detailed scoring procedures (e.g. higher scores on the scale reflect greater resilience. by which to understand resiliency. Despite this fact, the researchers decided that given the excellent psychometric properties, it's utility, and ease of administration, that the CD-RISC is still a valid measure of resiliency and would be included in this study.

Demographics Questionnaire. A demographic questionnaire was also administered to all study participants in order to collect basic background and demographic information. The questionnaire was developed by the original research team to serve this purpose. The demographic questionnaire gathered the following data: gender, age, ethnicity, and grade level at the university. In addition to this personal history information, the demographic survey also asked participants to identify if they had ever experienced any of the following potentially traumatic life events in the home when they were growing up: displacement from home, parental divorce, employment problems, legal problems, medical problems, mental illness, alcohol or drug addiction, suicide or suicide attempt(s), family death, and if they were ever emotionally, physically, or sexually abused during childhood. To better assess the outcome of these potentially traumatic experiences, the demographic survey also asks participants to rate the impact that each of the experiences had on their lives (if any). Only those students who indicated that an event occurred and that they judged the event to have had a significant effect on their lives were coded as “positive” for having experienced each traumatic event.

Procedures

The University of Toledo (UT) in Toledo, Ohio was the setting at which the

original data were collected. It is a student-centered, public metropolitan research university with over 23,000 students in undergraduate, graduate, and professional programs. Established in 1872, UT is one of 14 state universities in Ohio. In 2009, when the data was originally collected, the initial cohort size of new freshmen students was 4,045 (University of Toledo, Institutional Research Library, Retention 2011). Of the 4,045 students, 2,482 (61.4%) were white, 1,015 (25.1%) were black or African American, 180 (.5%) were Hispanic/Latino, and 116 (.3%) students did not report their racial/ethnic identity. From Fall 2009 semester to Spring 2010 semester, 84.3% were retained within the same academic year from first semester to second semester. This is consistent with the national average as approximately 22% of first year college students at public degree granting institutions in the United States do not return for their sophomore year (American College Test (ACT), 2011). From academic year 2009 to academic year 2010, 64.5% students were retained. After two full academic years (i.e. academic year 2009 to academic year 2011), the return rate was 52.7%. Thus, almost half the incoming freshmen who originally entered the University of Toledo in 2009 were not retained within two years of their beginning semester. For students who entered the University of Toledo in 2005, 23.8% graduated in 4 years, 41.7% graduated in 5 years, and 46.2% graduated within 6 years. This statistic compares nationally as graduation rates are below 50% (ACT), 2011). The University of Toledo was chosen to participate in the original study due to its large population and consistent graduation/retention statistics compared with the national averages.

Each year UT conducts 25 sections of an orientation course which is mandatory

for first year students. The original researchers received permission to approach each of these sections to request permission to use course time to recruit participants and administer the research materials during course time. A total of 19 (76%) of the instructors provided permission and course time for these purposes. The original researchers entered each of the 19 sections on the appointed days, explained the study's purposes and procedures, and invited all students aged 18 and older to participate. Potential participants were informed that their participation was voluntary and that whether or not they elected to participate would not affect their standing in the course or their relationship with the university in any way. All assenting participants provided written consent to complete the research assessment protocol and for the researchers to access, using the university's electronic transcript record database, their final fall semester grade point average, and their final first-year grade point average. Consenting participants were provided with an envelope in which the researchers provided a demographic data form, the Substance Abuse Subtle Screening Inventory-3 (Feldstein & Miller, 2007), the Resilience Scale (Wagnild & Young, 1993), the Ego-Resiliency Scale (Block & Kremen, 1996), and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003). The presentation order of the resilience measures was counterbalanced so as to reduce the effect of response fatigue on any one instrument. Upon completion, the researchers returned the study packets to this writer's dissertation chair's office where they were scored and the data transferred to Excel and SPSS storage formats. The consent forms were saved separately from the other research documents. All data and consents were archived in a locked university faculty office. Electronic data were saved on a

password protected university computer. The original researchers accessed end-of-first semester and end-of-first year grade point averages and recorded those in the same electronic database in which the other data were stored. Doing so allowed the researchers to determine which of the study participants persisted from first to second semester and which of the participants did not. The data from both the Substance Use Subtle Screening Inventory-3 and the Ego-Resiliency Scale used in the original data are not being used in this study. The present research project will utilize the electronic data set.

Variables

This study used the following variables. The outcome variables are first semester GPA (continuous: 0.00 to 4.00) and persistence from first to second semester (dichotomous yes/no: 1, 0).

The predictor variables are the two types of resilience as measured by The Resilience Scale (Wagnild & Young, 1993) (continuous: range = 25-175) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) (continuous: range= 0-100). Resilience is the categorical variable on the nominal scale of measurement. Additionally, self-reported history of trauma was coded as a dichotomous variable (1 = yes, 0 = no). The following types of trauma were assessed: divorce, employment problems, legal problems, medical problems, mental illness, alcohol and/or other drug dependence, suicide attempt or completion, death in the family, emotional abuse, physical abuse, and sexual abuse. In order for a participant to be considered “positive” for the presence of a covariate, the participant must have indicated that the event occurred, and that the impact/effect of the event had either a no impact or a significant

impact (1=yes, impactful, 0= no, not impactful). Each covariate will be measured as dichotomous (yes/no: 1/0).

Research Hypothesis

Research Question #1:

Are there differences in resilience between students who self-reported being traumatized and those who did not?

Ho: There are differences in resilience between students who self-reported being traumatized and those who did not.

H1: There are differences in resilience between students who self-reported being traumatized and those who did not.

Research Question #2:

Is there a significant relationship between resilience and the total types of trauma reported by students?

Ho: There is a significant relationship between resilience and the total types of trauma reported by students.

H1: There is not a significant relationship between resilience and the total types of trauma reported by students.

Research Question #3

Is there a difference in first semester grade point averages between students who self-reported a history of trauma and those who did not?

Ho: There is a difference in first semester grade point averages between students who self-reported a history of trauma and those who did not.

H1: There is no difference in first semester grade point averages between students who self-reported a history of trauma and those who did not.

Research Question #4

Is there a difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not?

Ho: There is a difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not.

H1: There is no difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not.

Data Analysis

This study's *a priori* alpha level is set at .05. To avoid making a Type II error, that is, failing to reject a false null hypothesis (Newman, Benz, Weis, & McNeil, 1997), the researcher conducted a Bonferroni correction technique (Newman, Fraas & Laux, 2000). In simple terms, the Bonferroni correction technique effectively spreads the *a priori* alpha level across the number of hypotheses. In this way, the chance of making a Type II error rate is consistent across the study, yet the researcher can control for family-wise error rates associated with multiple comparisons. The researcher is testing 7 hypotheses. As such, the Bonferroni corrected alpha rate to be tested for each hypothesis is .007 (.05/7).

The researcher conducted power estimates (McNeil, Newman & Kelly, 1996; Stevens, 1996) using conservative estimates and a sample size of 143. Power estimates provide the research an estimate of the Type II error rate for different size effects that

may exist in the study's sample. Cohen (1992) offered three levels of effect sizes (f^2) when comparing independent means in social science: small (.20), medium (.50), and large (.80). The researcher calculated a power estimate for each effect size. Based upon these findings, if there was a significant difference or relationship between students who saw a counselor and those who did not on the dependent variables and the effect size is small, power will be .99. If the effect size was at least medium or large, power will be .995. Therefore, the researcher is confident that if differences existed between counseled and non-counseled students on the tested variables, the statistical procedures and design employed in this study would have able to detect them even if the effect size is small (.20).

Inferential and descriptive statistics will be used to communicate the findings of the study. Descriptive data, such as means, standard deviations, and ranges of scores will be used to describe the sample, the resilience scale scores, first semester grade point averages, first year graduate point averages, persistence, and the types of developmental traumas experienced by the sample. The researcher will use a multiple analysis of variance to answer research question 1. Research question 2 will be analyzed using a Pearson product-moment correlation matrix. Research question 3 will be answered using a one-way analysis of variance. And, research question two will be addressed using a chi-square goodness of fit analysis.

Ethical Considerations

This study will be approved by the University's Institutional Review Board (IRB). Informed consent was obtained from all research subjects prior to their participation in

this study. This study's procedures followed the ethical guidelines for research as set forth by the American Counseling Association (2005).

Summary

The purpose of this study is to investigate the risk factors, resilience factors, and academic outcomes of a sample of undergraduate college students. By conducting this study, the researcher hopes to identify what most effectively serves as a protective mechanism against failing to persist from first year to second year at a university.

This study is based on an ex post facto research design. This type of design examines possible relationships by observing an existing condition or attribute and investigating plausible predictive factors (Campbell & Stanley, 1963). Cohen, Manion, and Morrison (2000) noted that instead of taking groups that are equivalent and subjecting them to different treatments to determine differences in the dependent variables, an ex post facto experiment begins with groups that are already different in some respect and searches in retrospect for factors that brought about those differences. Both descriptive and inferential statistics will be used to answer the identified research questions. It should be noted that all methods and procedures involved in this study were approved by the University's Institutional Review Board (IRB) and are in accordance with the American Counseling Association's Code of Ethics (2005).

Understanding the extent to which resiliency affects student academic outcomes should significantly impact the way universities both allocate their funds to retention and recruitment efforts, as well as how they plan to care for their students through programming and services. The results of this study should be used to understand how

universities can assist students in their intention to persist to a second year; thereby reducing dropout rates and improving graduation rates. While there will always be unanswered questions about resiliency and retention, this study will hopefully create positive discussion to address the issue.

Chapter Four

Results

Introduction

Chapter 4 begins with a review of the sample and participants included in this study. It then provides the reader with descriptive data as they apply to the instruments used in this study, including internal consistencies, frequencies, ranges, and standard deviations. The author then answers each of the four research questions posed in this study using the appropriate statistical procedures and a brief rationale for the chosen test. A post-hoc analysis was conducted by this researcher, the results of which are described for the reader. The chapter concludes with a summary of the data and findings.

Sample/Participants

The author used pre-collected data from a study completed in 2009. A total of 169 college students participated in the data collection project. The sample's mean age was 17.85 years ($SD = 4.88$, range = 0 - 49). Of the 169 total participants, 79 (46.7%) were female, 89 (52.6%) were male and 1 (.5%) participant identified as transgendered. In terms of ethnicity, more than half of the participants identified themselves as European American ($n = 92$, 54.4%), followed by 55 students who identified themselves as African American (32.5%). Additionally, there were 10 students who identified as Hispanic (5.9%), 9 who identified as Mixed/Biracial (5.3%), 1 who identified as Asian American (.5%), and 2 participants who identified their ethnicity as Other (1.1%). Of the 169 students who participated in the research, 167 of the participants reported their year at the university, with 166 (99.4%) being first year students and 1 (.6%) being a second year

student. All participants provided written consent for their participation in the research project.

Descriptive Data

This study used two measures of resilience and a demographic data collection form. The demographic data collection form was designed by the researchers who completed the study in 2009. The two measures of resilience were: The Resilience Scale (Wagnild & Young, 1993) and The Connor-Davidson Resilience Scale (Connor & Davidson, 2003). Each scale will be reviewed and the mean, standard deviation, and range will be provided.

The Resilience Scale (RS) (Wagnild & Young, 1993) was determined to have a good level of internal consistency (Cronbach's $\alpha = .846$). Reliability estimates of .80 or higher are typically regarded as moderate to high as approximately 16% of the variability in test scores is attributable to error (Creswell, 2014). This sample's mean RS score was 141.8 (SD = 21.1, range = 45-240). Based on the guidelines, participants' RS scores were grouped into categorical levels of resilience (Wagnild, 2009). Scores higher than 145 suggest moderately high to high resilience, scores of 125 to 145 are indicative of moderately low to moderate levels of resilience, and scores of 120 or less imply a low level of resilience (Wagnild, 2009). In this sample, 26 participants (15.4%) were determined to have low resilience, 80 participants (47.3%) had moderately low to moderate resilience, and 57 participants (33.7%) had moderately high to high levels of resilience.

The Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003) had a very good level of internal consistency (Cronbach's $\alpha = .93$). Creswell (2014) reported that reliability estimates of .90 or higher are regarded as highly reliable. The CD-RISC assesses how a subject has felt over the past month and is comprised of 25 items. Each item is rated on a 5-point Likert-type scale (Connor & Davidson). Scores are determined by summing each item, with total scores ranging from 0 to 100, making the CD-RISC a continuous measure. The mean score for this sample on the CD-RISC was 76.15 (SD = 14.32, range = 37-100).

In addition to the resilience data, the researcher also obtained data on participants' history of traumatic life events through the use of the demographic questionnaire. The life events included in the questionnaire include: parental divorce, employment problems, legal problems, medical problems, mental problems, addiction problems, attempted or completed suicide, family member death, and experiencing emotional, physical, and/or sexual abuse. Participants were asked to indicate if they had experienced a particular trauma and if/how it impacted them. Participants were able to designate if they had experienced multiple traumas. In this sample, 110 participants (65.1%) indicated that they had experienced at least one of the traumatic events during childhood. To clarify, these 110 participants stated they experienced a trauma and indicated that the trauma impacted them in a negative way. A total of 59 students (34.9%) reported that they had not experienced any of the traumatic events. On average, of the 110 participants who endorsed experiencing a trauma, there were an average of 1.01 adverse childhood events endorsed per person (SD = 1.609, range = 0-8). For all of the traumas endorsed by the

110 participants, 23 (21%) were negatively impacted by a parent's divorce; 12 (11%) were negatively impacted by parents' unemployment problems; 8 were negatively impacted by legal problems; 11(10%) were negatively impacted by medical problems; 15 (13.6%) were negatively impacted by mental problems; 23 (21%) were negatively impacted by addiction problems; 11 (10%) were negatively impacted by attempted or completed suicide; 12 (11%) were negatively impacted by a family member's death; 21 (19%) were negatively impacted by emotional abuse; 7 (6.3%) were negatively impacted by physical abuse; and 9 (8.2%) were negatively impacted by sexual abuse.

The researcher then obtained information from participants related to the impact of each of these life events on the participant. Participants who endorsed experiencing the event during childhood had the option to indicate that the life event had no negative impact (coded as "0") or a significant impact (coded as "1"). The fact that a participant experienced a negative life event does not necessarily mean that the event had a negative impact on the participant. For example, one could argue that a participant whose parents divorced while the participant was an infant may have no memory of the divorce and therefore declare that the actual event had little to no negative effect. Also, it is possible that the divorce experienced by a teenager whose parents were verbally or physically abusive towards each other may have been perceived as a trauma with a positive outcome. As a result, it was necessary to assess not only whether a negative life event took place, but also the degree to which that negative life event affected the participant, thus the data were coded as 0 = trauma did not happen or the trauma did happen, but the student reported the trauma having no impact on his/her life; 1 = trauma happened,

participant reported that trauma had a significant impact on his/her life. In order to be categorized as positive for one of these traumatic events, a participant had to have indicated that the event occurred at some point and that the event had a significant negative impact on their life.

Research Questions

Research question 1 asks: Are there differences in resilience between students who self-reported being traumatized and those who did not? The researcher chose to use a multivariate analysis of variance (MANOVA) for this question. MANOVA is a statistical test procedure for comparing multivariate means of several groups, or two different tests of significance. Using a MANOVA, instead of two separate t-Tests, reduces the likelihood of making a Type I error. A MANOVA uses the variance-covariance between variables in testing the statistical significance of the mean differences. More specifically, a MANOVA is used when there are two or more dependent variables and one independent interval variable with two or more levels (independent groups). For this question, the MANOVA was conducted to assess if there were differences in resilience between participants with a linear combination of those who were traumatized and those who were not. The dichotomous variable, traumatized or not, served as the predictor variable and total scores for the Resilience Scale and Connor-Davidson Resilience Scale served as the criterion variables. The means, standard deviations, and ranges of scores for the RS/CD categorical data, when described as interval data, are located in Table 1.

Table 1.

Score means, standard deviations, and ranges of scores for the two resilience scales. Below are the mean scores, ranges, and standard deviations for each of the three resilience scales used in this study.

Measure of Resilience	Traumatized or Not?	N	Minimum	Maximum	Mean	Std. Deviation
Resilience Scale	No	55	45	175	143.69	21.98
	Yes	104			140.66	21.06
CD-RISC	No	55	37	100	78.76	12.17
	Yes	104			74.67	15.35

The MANOVA failed to produce a statistically significant difference in resilience scores between participants based on their traumatization status, Wilk's Lambda (λ) = .981, $F(2, 156) = 1.484$, $p = .230$, $\eta^2 = .019$. Therefore, based on the use of MANOVA for research question one, there were no significant differences found between traumatized and non-traumatized students on either the RS or the CD-RISC. Examination of the coefficients for the linear combination distinguishing the participant's traumatization category (yes or no) indicated that resilience was not different between participants who had been traumatized and those who had not.

Research question 2 asks: Is there a relationship between resilience and the total types of trauma reported by students? For this question, the researcher used the Pearson Product-Moment Correlation Coefficient (Pearson's r), which is a measure of the linear correlation (dependence) between two variables, X (resilience) and Y (total types of trauma reported). The Pearson's r correlation analysis for the CD-RISC demonstrated a negative and statistically insignificant relationship between resilience and total types of

trauma ($r = -.134, p = .090, r^2 = .018$). The Pearson's r correlation analysis for the RS demonstrated a negative and statistically insignificant relationship between resilience and total types of trauma ($r = -.075, p = .344, r^2 = .006$). The answer to research question two is that there was no correlation and therefore no relationship between resilience and the total types of traumas reported by students on either the CD-RISC or the RS.

Research question 3 asks: Is there a difference in first semester grade point averages (GPA) between students who self-reported a history of trauma and those who did not? The researcher chose to administer an analysis of variance (ANOVA), which is used to provide a visual comparison of group means. In ANOVA setting, the observed variance in a variable is portioned into components attributable to different sources of variation. At its core, ANOVA provides a statistical test of whether or not the means of several groups are equal; therefore, it generalizes the t-test to more than two groups. It is possible to conduct multiple t-tests in place of ANOVA; however, this would increase the chance of committing a Type I error. Since there was one dependent interval variable (GPA, measured from 0.0-4.0) and one independent categorical variable with two levels (independent groups) (traumatized or not), ANOVA was the best test to answer the research question. Table 2 shows that there was a significant interaction between first semester GPA and resilience, $F(1,167) = 7.704, p = .006, \eta^2 = .044$. Simple effect analyses revealed that, of students who were not traumatized, those students had higher GPAs (average GPA = 2.69) than students who were traumatized (average GPA = 2.19).

Table 2.

Mean and Standard Deviation Scores for GPA and traumatization status. Below are the mean scores and standard deviations for the student's identified traumatization status (yes/no) and first semester GPA.

Traumatized or Not?	Mean	Std. Deviation	N
No	2.69	.987	59
Yes	2.19	1.185	110

Research question 4 asks: Is there a difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not? For this research question, the researcher chose to perform a Chi-square test since there was one dependent variable (persistence) and one independent categorical variable with two levels (independent groups) (traumatized or not). Chi-square (χ^2) is a statistical hypothesis test used to compare observed data with data we expected due to chance. The chi-square test is always testing the null hypothesis, which states that there are no significant differences between the expected and observed result. The results were $\chi^2(1, 3) = .418, p < .518$, indicating that there is no significant difference in persistence between first and second semester between those who self-reported a history of trauma and those who did not. Students would not drop out more than expected by chance given their trauma history, or in other words, trauma has little to do with a student's persistence from first semester to second semester.

Post-hoc Analyses

Out of curiosity, the researcher sought to determine if there were differences

between the student's persistence from first semester to second semester based on their resilience scores between the two measures of resilience, Resilience Scale (RS) and Connor-Davidson Resiliency Scale (CD-RISC). The results indicated that those students who persisted had higher RS scores ($X = 142.78$, $SD = 21.11$) than those who did not persist ($X = 139.24$, $SD = 16.46$). However, the CD-RISC scores of students who did not persist ($X = 79.92$, $SD = 11.39$) were higher than those students who did persist ($X = 75.446$, $SD = 14.82$). The magnitude of the effect size of the difference between the two groups on the RS scale was small ($d = .187$) and the magnitude of the difference between the two groups on the CD-RISC was between small and medium ($d = .339$) (Cohen, 1992). The means and standard deviations for each resilience scale by persistence status are located in Table 3.

Table 3.

Resilience scale scores based on persistence status. Below are the mean scores, standard deviations, and frequencies for both resilience scale scores based on the student's persistence status (yes/no).

Test	Persistence?	Mean	Std. Deviation	N
CD-RISC	Yes	75.446	14.82	130
	No	79.92	11.39	28
RS	Yes	142.78	21.11	130
	No	139.24	16.46	28

Summary

The researcher began this chapter by describing the sample and participants used in this study. The internal consistency levels were presented for each of the instruments used, and then descriptive data was provided for each of the measures (mean, ranges, standard deviations). Data on the adverse childhood events was then presented, including

the number of participants endorsing these items and whether the participant endorsed the trauma as impactful or not. The researcher then discussed the 4 research questions by identifying the type of test used and the results. The researcher found that resilience was not different between participants who had been traumatized and those who had not. Similarly, no relationship between resilience and the total types of traumas were reported by students on either resilience scale. Of students who were not traumatized, those students had higher GPAs (average GPA = 2.69) than students who were traumatized (average GPA = 2.19). Finally, the findings revealed that trauma has little to do with a student's persistence from first semester to second semester. Due to the limited data collected in the original study, the researcher could not predict how trauma would affect persistence between years (e.g. first year to second year). After answering the research questions, the researcher also conducted one post-hoc analysis to understand if there were any differences between persistence and resiliency scores. The researcher found that those students who persisted from first to second semester had higher scores on the CD-RISC, but had lower scores on the RS.

In Chapter 5, the researcher will discuss these findings. This will include integrating the findings into the existing literature, presenting the implications of these findings, identifying the limitations of this study, and providing the reader with suggestions for future research.

Chapter Five

Discussion

Introduction

Chapter 5 begins with a brief summary of the available literature which justifies the research presented and then conducted in this study. The researcher then summarizes the purpose of this study, the procedures, and the findings, which are then integrated into the current literature base. Finally, the implications will be stated for the intended audiences: researchers, higher education administrators, and practicing counselors. The researcher then identifies and explains the limitations of this current study. The chapter concludes with suggestions for future research resulting from this research study and a general summary of the study conducted.

Background and Study Findings

Many American colleges and universities are tasked with having more responsibilities with fewer resources (Yagil, 2008) due to budget cuts at both the state and federal levels. With diminished resources and the need for accountability measures, there has been an emphasis placed on understanding student retention in higher education. Students, in addition to their risk factors and protective factors, leave universities for a variety of reasons, including: academic difficulty, adjustment problems, uncertain goals, lack of commitment, inadequate finances, lack of student involvement, poor fit, and/or mental health issues (Tinto, 2011). Despite the reasons, there is still a lack of understanding of how each of these factors uniquely plays in to a student's persistence decision, especially in the first year, when retention rates are the most problematic as

approximately 22% of first year college students at public degree granting institutions in the United States do not return for their sophomore year [American College Test (ACT), 2011].

One factor to consider in terms of retention and persistence in higher education is resilience. Resilience has emerged as a term used to describe the processes underlying how some individuals behave adaptively under great stress (Masten, 2001). Often used interchangeably with the word resiliency, resilience is defined as the “process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990, p. 406). Resilience may help explain why some individuals with aversive traumatic events in their past are able to cope with the complexities of college learning and earn a degree, while others with similar experiences are not; ultimately failing to persist or matriculate through an institution of higher education.

To understand how resilience and retention relate, the researcher examined one facet of an amalgamation of The Diathesis Stress Model (e.g. Ingram & Luxton, 2005) and Tinto’s Student Integration Model (Tinto, 1975). Based on the literature and understanding of how resilience and psychopathology can affect a student’s experience in higher education, these two models were integrated into one working model to understand how resilience affects retention for a student in higher education. Resilience and psychopathology were added as initial commitments, or traits that the student brought with them in his/her entry into an institution of higher education. These traits influence the way the student is able to integrate into the university, both socially and

academically, which in turn, may affect their decision to persist onto another year or to drop out. According to Tinto's model, the researcher believes that it is likely that those students who exhibit resilience rather than psychopathology after experiencing an adverse traumatic experience may be more likely to persist onto a second year of college.

Because the current study did not assess for "fit" or social integration at a university, which is a variable in Tinto's model, or persistence from first to second year, no formal conclusion can be made.

The purpose of this study was to better understand if and how resilience affects retention in large urban universities. By conducting this research, the author intended to identify which psychosocial factors were assisting students in their pursuit to obtain a degree in a higher education institution. To accomplish this task, the author used pre-collected data from a study done in 2009. During that study, permission was received from university administrators to approach twenty-five (25) sections of a university orientation course. Nineteen of the 25 course instructors gave permission for the researchers to visit each class to run the study. Voluntary participation and a statement about confidentiality was reviewed and informed consent signatures were obtained. Participants were given study packets containing two resilience measures, The Resilience Scale (RS) and the Connor-Davidson Resilience Scale (CD-RISC), and one demographic questionnaire. Participants returned the packets upon completion and the data was taken back to the department for storage in a password-protected computer in a locked office. This study was an ex post facto research design; due to the all the data examined being archived. This study used both descriptive and inferential statistical analyses. The

descriptive statistics included were frequencies, means, standard deviations, correlations and estimates of internal consistency.

For the first research question, the author sought to identify differences in resilience between students who self-reported being traumatized and those who did not. The researcher chose to use a multivariate analysis of variance (MANOVA) for this question. The answer to research question 1 was “no” since the MANOVA failed to produce a statistically significant difference in resilience scores between participants based on their traumatization status. Distinguishing the participant’s traumatization category (yes or no) indicated that resilience was not different between participants who had been traumatized and those who had not. The second research question sought to establish a relationship between resilience and the total types of trauma reported by students. For this question, the researcher used the Pearson Product-Moment Correlation Coefficient (Pearson’s r), which is a measure of the linear correlation (dependence) between two variables. The Pearson’s r correlation analysis for both CD-RISC and RS demonstrated a negative and statistically insignificant relationship between resilience and total types of trauma. The answer to research question 2 is that there was no correlation and therefore no relationship between resilience and the total types of traumas reported by students on either resilience scale. This lack of significance may be attributable to the limited range of variability found. Research question 3 sought to understand if there was a difference in first semester grade point averages (GPA) between students who self-reported a history of trauma and those who did not. The researcher chose to administer an analysis of variance (ANOVA), which is used to provide a visual comparison of group

means. A significant interaction between first semester GPA and resilience was found. Simple effect analyses revealed that, of students who were not traumatized, those students had higher GPAs (average GPA = 2.69) than students who were traumatized (average GPA = 2.19). Finally, research question 4 sought to identify any differences in persistence between first and second semester between those who self-reported a history of trauma and those who did not. For this research question, the researcher chose to perform a Chi-square test since there was one dependent variable (persistence) and one independent categorical variable with two levels (independent groups) (traumatized or not). The results indicated that there were no significant differences in persistence between first and second semester between those who self-reported a history of trauma and those who did not. Students would not drop out more than expected by chance given their trauma history, or in other words, trauma has little to do with a student's persistence from first semester to second semester during the freshmen year.

Post-hoc analyses conducted by this researcher sought to determine if there were differences between the student's persistence from first semester to second semester based on their resilience scores between the two measures of resilience, Resilience Scale (RS) and Connor-Davidson Resiliency Scale (CD-RISC). The results indicated that those students who persisted had higher RS scores than those who did not persist. However, the CD-RISC scores of students who did not persist were higher than those students who did. While the RS and CD-RISC both set out to measure resilience, each scale measures the construct of resilience slightly different which could have led to the outcome of the analysis showing differences between the scales. The results may have also been different

between the two scales because of CD-RISC's limited administration and scoring procedures, which was noted as a limitation of the scale in chapter three.

Over and above the stated research questions and post-hoc analyses, several other observations should be noted, with the first being that there were a large number of participants who reported that they had experienced adverse childhood events. More than three-fourths of the total sample indicated that they had experienced at least one, if not several, of the aversive childhood events during childhood [n= 110 participants (65.1%)]. This statistic suggests that traumatic events experienced in childhood are not rare or isolated. It is also important to note that while some participants endorsed a specific adverse life event, some stated that the event was impactful in a harmful way while others only acknowledged that it happened. It may be that some of the events that were considered potentially traumatic to a participant actually had a positive outcome for the participant (e.g. separation from abusive parents). With the results taken into consideration, it is may be that merely witnessing an adverse event may sometimes be less traumatizing than actually experiencing the event on a personal level.

Additionally, while three out of the four research questions failed to produce statistically significant findings, it can be viewed as a positive finding that the data failed to produce significance in resilience scores between participants who experienced trauma and those who did not. Some might expect that the individuals who experienced one or more adverse traumatic life event(s) in childhood might have less resilience in adulthood based on these traumatic experiences, yet the data revealed that resilience was not different between participants who had been traumatized and those who had not.

Therefore, participants with a trauma history must have found ways to process through and move beyond their adverse childhood experiences in order to have levels of resilience comparable to those without a history of trauma. A thorough review of how this occurs and/or what leads the individual to be able to grow and cope with these events would be beneficial in understanding why those who experience traumatic events have differing degrees of resilience.

Integration of Findings into the Literature

The purpose of this study was to better understand if and how resilience affects retention in higher education. To do this, the author sought to include theory by reviewing both The Diathesis Stress Model and Tinto's Student Integration Model (Tinto, 1975). The Diathesis Stress Model attempts to understand why, based on pre-existing vulnerabilities, some people exhibit resilience and others develop psychopathology based on experiencing traumatic life events. Tinto's Student Integration Model (Tinto, 1975) attempts to understand which factors contribute to a student's decision to drop out of a university based on their social and academic integration. Tinto proposed that if academic and social integration are positive, commitment and motivation to attain a degree are enhanced. Based on the literature and understanding of how resilience and psychopathology can affect a student's experience in higher education, these two models were integrated into one working model to understand how resilience affects retention for a student in higher education. Within the pictorial layout of Tinto's Student Integration Model, resilience and psychopathology were added as initial commitments or traits that the student brought with them in his/her entry into an institution of higher education.

These commitments influence the students' time and overall experience of how the student is able to integrate into the university, both socially and academically, which in turn, may affect their decision to drop out of the university.

Within this integration of the two models, the author sought to understand what factors specifically affect a student's decision to stay at a university. For several decades, researchers have examined students' adjustment to college, that is, why some students make the transition successfully, whereas others struggle or leave school after only a short time (see, for example, Ezezek, 1994; Morrow & Ackerman 2012). Among many, the three main established risk factors for early drop-out include: experiencing a trauma (e.g. Banyard & Cantor, 2004); poor academic preparation and performance (e.g., Cejda & Rewey, 1998; Wessell, Engle, & Smidchens, 1978); and low perceptions of social support (e.g., Sparkman, Maulding, & Roberts, 2012).

The present study focused on students' childhood experiences with aversive traumatic life events. Many college students arrive to campus with a history of exposure to traumatic events, with childhood traumas, such as abuse, having been linked to an increased likelihood of dropping out of college (e.g. Duncan, 2000), depression (e.g. Wagnild & Young, 1993; Turner & Butler, 2003), and suicide (e.g. Bridgeland, Duane, & Stewart, 2001). When a traumatic experience surfaces and academic or personal issues arise as a result, the student either reverts back to previously learned coping skills or does not cope at all and simply drops out (Banyard & Cantor, 2004). This can be linked to the inclusion of "resilience" or "psychopathology" in the Diathesis Stress Model. It is difficult to know if, when, or how a traumatic reaction will occur; however, according to

Banyard and Cantor, students who have been through a trauma are at more risk for a failure to persist than those without a past trauma. While the results of this study show little support for the notion that resilience predicts persistence, the results did indicate differences in GPA between traumatized and non-traumatized students. One could hypothesize then that traumatized students may not drop out because of their aversive experience; however, they may not academically perform comparatively to their non-traumatized peers. According to integrated model of Tinto and the Diathesis Stress Model, the student would need to make a positive commitment to the university in terms of their academic outcomes (e.g. attention and extra effort in grades) in order to be retained by the university.

In addition to what affects a student's persistence decision, resilience was also identified in this study as a process whereby some individuals are able to bounce back from traumatic events and continue to adapt to new environments. Luthar and Cicchetti (2000) described resilience in terms of protective factors that foster the development of positive outcomes and health personality characteristics among those who have been exposed to unfavorable or aversive life circumstances. Resilience has been a topic of interest in higher education for decades as it helps to explain why some students transition well to the collegial environment, despite their childhood history, and others do not, failing to persist and matriculate. In addition to resilience, Nancy Schlossberg created The Transition Theory (Schlossberg, 2011) to understand the complexity of how individuals experience changes in their life. "The transition framework is designed to depict the extraordinarily complex reality that accompanies and defines the human

capacity to cope with change” (Schlossberg, Waters, & Goodman, 2006, p. 55). The intent to include this theory was to underline the importance that transition to college, in itself, can be traumatic and/or problematic for some students depending on past experiences and current coping skill utilization. The strategies needed to help a student work through their transition from high school to an institution of higher education will vary depending on whether the student is moving in, through, or out of the transition. While this specific aspect was not addressed in this study, it is important to be mindful of where the student is in their transitional process when data is collected about resilience, academic performance, and persistence.

Whether adaption or response to transition, resilience has been discussed in the literature as having an impact on a student’s persistence (Shields, 2001). Poor academic preparation and performance were also identified in the literature as threats to a student’s persistence onto another year in college (e.g. Brown & Robinson, 1997; Cejda & Rewey, 1998; Wessell, Engle, & Smidchens, 1978). When examining student retention, a common practice is to predict student retention status or cumulative grade average, which typically involves cognitive and non-cognitive factors. With cognitive factors, several empirical studies found that high school grade point averages and standardized aptitude scores were significant predictors of academic success at the post-secondary level (e.g., Harackiewicz, Barron, Tauer, & Elliot, 2002; Murtaugh, Burns, & Schuster, 1999). For example, Brown and Robinson (1997) found that academic preparation and aspirations, academic performance, and interactions with faculty and staff could differentiate between those who persisted and those who did not persist in school. One important finding in this

study supported the assertion that GPA is a predictor of academic and persistence outcomes. The results indicated that there was a significant interaction between first semester GPA and resilience. In other words, students who were not traumatized had higher GPAs (average GPA = 2.69) than students who were traumatized (average GPA = 2.19). This finding acknowledges that while resilience may not predict a student's persistence decision, it may impact a student's academic outcome, which could affect their ability to remain enrolled in coursework.

Yet despite this understanding, the results also indicated that there were no significant differences in persistence between first and second semester between those who self-reported a history of trauma and those who did not. Students would not drop out more than expected by chance given their trauma history, or in other words, trauma has little to do with a student's persistence from first semester to second semester. So while students who have not experienced a trauma tend to have better academic outcomes, evidenced by a higher GPA, the results of this study go against Banyard and Cantor's (2004) assertion that students who have been through a trauma are at more risk for a failure to persist than those without a past trauma.

The researcher originally asserted that those students who exhibit resilience rather than psychopathology after experiencing an adverse traumatic experience are more likely to persist onto a second year of college. While more research should be conducted in this area to provide a comprehensive picture with a larger and more diverse sample and a longitudinal scope of persistence data, the current study disproves this assertion. The findings indicated that there was no relationship between resilience and persistence

between semester one and two. Based on this finding, the integration of The Diathesis Stress Model and Tinto's Student Integration Model, while an interesting concept, would not be helpful in understanding how students determine their decision to persist onto a second year at a university or not.

Implications

There are a number of implications based on the results of this study, primarily for higher education administrators, practicing counselors, and counselor educators. The findings supported the overall purpose of the study which was to understand if resilience is associated with retention in higher education, which revealed that resilience is not associated with retention between semester one and semester two in the first year at a university. It is necessary to clarify that the current study assessed resilience between first semester and second semester; therefore, it cannot generalize between persistence going from first year to second year. No statistically significant results were gleaned between resilience and traumatization status, resilience and total types of trauma, or resilience and persistence.

Higher Education Administrators. A significant finding demonstrated in this study was that students who were not traumatized had higher GPAs than students who were traumatized. This finding supports the assertion that while resilience may not directly affect a student's decision to persist between semester at a university, the student's academic outcomes (e.g. GPA) may be related to whether or not the student experienced aversive traumatic life events as a child. The outcomes could potentially affect the student's persistence decision since some universities have drop off scores (i.e.

final grades, exam grades, semester GPA) by which a student would not be allowed to come back for another semester without some form of academic remediation. Given this information, academic advisors and other support personnel, who record and monitor student outcomes, may encourage students who struggle to seek academic help opportunities geared towards student success (i.e. tutoring, library programs, mentorship). Additionally, academic advisors could promote the use of the campus counseling center as resource to determine if there are psychological factors that are influencing their academic performance.

According to Schlossberg's Transition Theory (2011), the strategies needed to help a student work through their transition from high school to an institution of higher education will vary depending on whether the student is moving in, through, or out of the transition. For example, a brand new student needs help to "learn the ropes" (e.g. mentorship on time management, getting a feel for the campus, learn socially acceptable norms for campus life). First year orientation programs, mentorship programs, and resident advisors are utilized by universities as a "socializing agent" to help new students learn the informal as well as formal climate (Schlossberg, 2011). Moreover, a plateaued student may need help to "hang in there" or revitalize during final exams or between semesters. These students become restless and need new support to renew or restore their transition. For other students, either remaining engaged through coursework, employment, or extracurricular activities keeps them encouraged to continue through the transition (i.e. persistence or matriculation); therefore, it is critical that universities invest in opportunities to support a student's transition into and through this new academic

experience and environment.

Advisors could use this information to help students, yet those administrators concerned with retention and recruitment would also benefit. The population of interest in this study was first year freshmen students, which are a group widely studied in terms of recruitment and retention efforts. The literature states that the first year is the most critical in shaping persistence decisions and plays a formative role in influencing student attitudes and approaches to learning (e.g., Fitzgibbon & Prior, 2003; Pascarella & Terenzini, 1991; Tinto, 1987, 1996). It is important for administrators to take note of the number of students in this study who endorsed experiencing an aversive traumatic life event and to provide programs or services targeting this population for remediation, assistance, and support. Though the researcher did not look at what specific programs that might include and could not identify the link between resilience and persistence in the present study, previous researchers have identified significance between the two variables in the past (e.g. Hartley, 2010; Masten, 2001; Masten & Reed, 2002; Tinto, 2011). Given this knowledge, administrators may want to consider providing academic and social supports for this population to improve retention since more than half the sample represented in this study endorsed their experiences with traumatic life events occurring in childhood.

Practicing Counselors. There are also implications for practicing counselors both in community mental health agencies and/or on college campuses. The large majority of the participants in this study (n= 110) who had endorsed experiencing at least one adverse traumatic life event during childhood, in addition to those who were negatively impacted

by these events, suggests that childhood trauma is more commonly experienced than previously thought. Given this finding, campus counselors could provide group counseling or programming related to trauma to provide an outlet for students wishing to deal with the complexities of their experiences. Additionally, counselors, no matter where they practice, should ask about and further assess for a detailed history of trauma, whether identified as a presenting problem or not. Since the findings of this study explained that while some students experience traumatic events and were negatively impacted, yet others were not impacted or positively impacted, counselors should ask questions about an event's occurrence, as well as the frequency of the occurrence. Furthermore, questions identifying the perceived impact of the student would be helpful for counselors to know when going forward in treatment planning. Inevitably, evaluating for past trauma (i.e. physical, emotional, mental, observed etc.) should become a standard measure at intake and throughout the counseling relationship. Finally, counselors should be aware of and continually evaluate for issues that often co-occur or come as a result of traumatic life events, including but not limited to: depression, anxiety, posttraumatic stress disorder, substance abuse/dependence, complex grief reactions, and/or any other emotional or psychiatric symptoms.

Counselor Educators. Going forward, counselors should approach the topic of trauma with sensitivity and intentional assessment; however, counselor educators are also charged with appropriate training in this area. As the responsible party assigned to educate and train practicing counselors, this study also has implications for counselor educators as they prepare counselors for their clinical work. Educators should provide

students with a broad understanding of what constitutes a trauma, including the frequency of aversive childhood traumatic life events and potential outcomes for survivors of these events. Additionally, educators should discuss the impact of trauma and how individuals uniquely experience these events which lead to different levels of impact perceived by the client. Erasing general myths and stigmas in mental health is the job of everyone in the profession (e.g., if you were sexually abused as a child, you will develop posttraumatic stress disorder); however, Counselor Educators are at the forefront of this movement in their efforts to teach and prepare new professionals. Furthermore, it is incumbent upon educators to train students to intentionally assess clients for a history of trauma, including types, frequency, and impact, in addition to any potential co-occurring symptoms or disorders. For Counselor Educators, the process of educating future counselors about trauma might include: providing examples of appropriate questions to ask through assessment, demonstrating role play scenarios at the intake state or going through a trauma narrative, identifying personal biases, and/or going through sensitivity training. If students are more prepared to assess the problem, it is possible that complex issues associated with trauma could be identified and treated in an appropriate and timely manner.

Limitations

This study has limitations that should be addressed. First, because of the population involved in this study, first year students, this study's results cannot be generalized to students in higher grades. Older, more experienced students may respond differently than first year students on the assessments in this study. Similarly, the

participants were taken from only one university in Northwest Ohio, which raises the possibility that the study's results might not generalize to other colleges and universities in other geographic locations or states, which serve a different demographic of students (i.e. liberal arts, community college, private university).

There are also limitations to using an ex post facto research design for this study. First, this type of design is weaker than experimental designs. There are many threats to internal validity associated with this design. Each of these threats offers alternative explanations for any relationships or differences that this study may uncover. This type of research lacks control due to 1) the inability to randomize, and 2) the inability to manipulate independent variables due to its retrospective nature (Okolo, 1990). The inability to manipulate variables leads to an inability to infer causation. The third limitation 3) is the higher possibility of incorrect interpretation, thus being misleading compared to experimental design. The results of ex post facto research can easily be misinterpreted if the research is conducted without appropriate hypotheses and predictions (Okolo, 1990).

An additional limitation relates to the use of pre-collected data. Because the researcher used pre-collected data for this research study, the researchers had little choice in determining the variables, instruments, and methods used by the original researchers. The author had intended to discuss retention between first year and second year for this population, yet could only focus on within year retention (e.g. first semester to second semester) given the data set. While the findings in this study are meaningful, this study only examined a small slice of persistence data that cannot generalize across years at a

university. Also, since there was no specific information, especially related to student integration, “fit” at a university, and level of impact of the each traumatic event on the participant, there may be gaps in the applicability of particular models and to the overall utility of this study. Additionally, in the demographic questionnaire, the researcher asked the participant to designate “yes/no” for if they had experienced a trauma or not. To gather a qualitative or more in-depth understanding of how resilience impacted the participant, the researchers should have asked questions centered on the context of the trauma. For example, “How many times did you experience the stated trauma?” “What point in your life did the trauma occur?” “Were you the perpetrator or victim of the trauma?” and/or “Did you experience the trauma or observe the trauma happening to someone else?” These questions might have assisted the researcher to draw conclusions about the impact, proximity of the trauma to the individual, and the understanding of a one-time trauma versus a repeated experience with the trauma (e.g. sexually abused one time versus years of abuse).

Using the Pearson Correlation for research question 2 also presented a limitation in this study. There was a restricted range present in the data that may have lessened the likelihood of significant correlation between the total number of traumas reported. If the variable assessing trauma had more variability, the researcher may assume that there could have been correlation and therefore a relationship between resilience and the total types of traumas reported by students on either resilience scale.

Suggestions for Future Research

Upon completion of the study, the researcher has identified suggestions for future

research which might fill in the gaps of the current study and extend the research to other professions and disciplines. First, future researchers may find it more beneficial to choose a new sample and collect data using specified variables of interest that were not included in the original sample of pre-collected data. To increase generalizability, researchers should include multiple universities in their study, potentially categorized by type (e.g. public or private) or demographic (e.g. size, geographic location, funding source). Comparing data from several sources might establish links and inform universities about student's trends or intentions. Additionally, encouraging a bigger sample of the freshmen class to participate would be more inclusive and decrease false generalizations. The author of the current study would have also preferred to include data regarding the perceptions of students about their "fit" and/or their level of integration at the university in effort to be able to fully understand Tinto's Student Integration Model and how it applies to the study. Finally, collecting both between semester and between year persistence data at a university would offer researchers valuable longitudinal retention data that could be applied in various contexts.

Future researchers should consider developing a screening tool for practitioners and/or university administrators that would aid in predicting retention of first year university freshmen, taking into account the findings of the current study. This is still an important topic to explore because it would offer benefits for practitioners, educators and administrators. From the findings, it appears the screening tool would rely less on the link between resilience and trauma, and more on academic outcomes (e.g. GPA, test scores, exam grades, and cognitive tests). Also, the field would benefit from more research

specifically analyzing universities that have high retention and high academic outcomes to understand which factors create this type of environment.

Within the screening tool, if a future researcher designed a study about life events such as this one, especially the impact of these events, the life events should be evaluated individually. For this study, all of the events were taken together into one main category of “traumatic life events.” It was only after the events were categorized as impactful or not impactful did the researcher evaluate the relationship between the events and resilience. In the future, the researcher should indicate the level of impact (i.e. 0 = no impact; 1= positively impactful; 2= negatively impactful) in an effort to differentiate between how the event was perceived by the individual. Additionally, the researcher did not look at the individual types of trauma to determine if one was more predictive of resilience than another. A possibility exists that one type of trauma might have been more impactful than others (i.e. witnessing a suicide versus parental legal programs).

In this study, the researcher chose to focus on resiliency measures that assessed the variable of resilience as a process versus a trait. If repeated, the researcher would have assessed resiliency in terms of being both a process and a trait, then discuss the differences between the data, especially in terms of how the construct of resilience might change between the two measurements. Additionally, while this study looked at aversive traumatic life events in childhood, the researcher had an interest in understanding events from other time periods (e.g. late adolescence, adulthood, older adulthood) since not all first year students are 18-years-old and begin college straight from high school. In essence, a future study would assess relationships between resilience, persistence, and the

non-traditional student. To do this, the researcher would co-vary the time period of the traumatic life event with resilience.

In terms of replication, this study could be completed with high school students. School counselors would benefit from knowing if, after having been through traumatic life events, were high school students able to exhibit resiliency and graduate from high school? School administration would benefit from knowing how traumatic events affect their students' high school GPAs, attendance records, and graduation rates.

Summary

Much research has been conducted to understand how resilience plays into a student's decision to persist onto another year in higher education. The concept of resilience has been promoted as one of the ways in which individuals experiencing aversive life events can end up with a different lived experience. This study attempted to understand if and how resilience affects retention in large urban universities. Despite the mixed results of the study, the researcher did identify several notable implications based on this study's findings, as well as a number of suggestions for future research. The results indicated that there was no statically significant evidence that resilience affects retention at a large university as hypothesized. There were limitations to this study in reference to population, specific sample, generalization ability, and study design. However, this is still an area that is in need of further research due to low retention and reduced fiscal management at universities at this present time. Being able to predict the likelihood of a first year student's decision to persist could lead to changes in the way

universities recruit and retain students, increasing the quality of university life and one's experience in the collegial environment.

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Appendix A

The University of Toledo Institutional Review Board (IRB) Form



The University of Toledo
Department for Human Research Protections
Social, Behavioral & Educational Institutional Review Board
Office of Research, Rm. 2300, University Hall
2801 West Bancroft Street, Mail Stop 944
Toledo, Ohio 43606-3390
Phone: 419-530-2844 Fax: 419-530-2841
(FWA00010686)

To: John Laux, Ph.D. and Allison Amekrans
Department of School Psychology, Higher Education & Counselor Education

From: Barbara K. Chesney, Ph.D., Chair
Mary Ellen Edwards, Ph.D., Vice Chair
Walter Edinger, Ph.D., Chair Designee
Lee Ann Pizzimenti, J.D. Chair Designee

Signed:  _____ **Date:** 01/16/14

Subject: IRB#0000200026

Title: *The Relationship between Adverse Childhood Events, Resilience, and Retention*

On 01/16/14, the above research was reviewed and approved as Exempt (category #4) by the Chair and Chair Designee of the University of Toledo (UT) **Social Behavioral & Educational** Institutional Review Board (IRB). The requirement to obtain a signed consent form has been waived as this research is determined to be minimal risk and a signed consent document would be the only record linking the subject to the data. It was determined that this waiver for signed consent will not adversely affect the rights and welfare of the participants. This action will be reported to the committee at its next scheduled meeting.

Please Note: A consent form is not required for this study. However an Information Sheet regarding the study should be distributed to potential participants. This Information Sheet should include the name and telephone number of a contact person in case the subjects need additional information. It is also strongly encouraged that the study be explained verbally to potential subjects.

Items Reviewed:

- IRB Application Requesting Exempt Review

Designated as EXEMPT RESEARCH on: 01/16/14

Please read the following attachment detailing Principal Investigator responsibilities.

Appendix B

Demographic Questionnaire

Please answer the questions below. You may circle the appropriate answer or write your answer on the line provided. Please print. DO NOT include any identifying information on these pages.

1. What is your gender?

Male Female Transgendered Other: _____

2. What is your age? _____

3. What is your race?

African American/Black
Asian American
Latino/Hispanic
Native American
Native Hawaiian or other Pacific Islander
White/Caucasian
Two or more races: _____
Unknown
Other: _____

4. What is your current student status?

Freshman
Sophomore
Junior
Senior
Other: _____

5. While you were growing up, did you EVER live with anyone other than your biological parents for a significant length of time?

(Please circle): YES NO

a) *If YES, please indicate your childhood living situation below.*

- Foster care
 Grandparent(s)
 Aunt/Uncle
 Neighbor
 Family friend
 Correctional setting (e.g., juvenile detention center)
 Homeless shelter
 Other: _____

a) *If YES, how old were you when you lived with someone other than your biological parents?* _____

Appendix C

The Resilience Scale (RS)

The Resilience Scale (RS) is protected by Copyright. Therefore, it cannot be included in the Appendices.

Appendix D

Connor-Davidson Resiliency Scale (CD-RISC)

Please circle a number indicating the degree to which the following statements apply to you

1. I am able to adapt to change.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

2. I have close and secure relationships.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

3. I believe that sometimes fate or God can help.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

4. I can deal with whatever comes.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

5. Past success gives me confidence for new challenges.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

6. I see the humorous side of things.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

7. Coping with stress strengthens me.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

8. I tend to bounce back after illness or hardship.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

9. Things happen for a reason.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

10. I give my best effort no matter what

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

11. I believe I can achieve my goals.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

12. When things look hopeless, I don't give up.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

13. I know where to turn for help when I need it.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

14. Under pressure, I can focus and think clearly.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

15. I prefer to take the lead in problem solving.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

16. I am not easily discouraged by failure.

not true at all	rarely true	sometimes true	often true	true nearly all of
-----------------	-------------	----------------	------------	--------------------

				the time
(0)	(1)	(2)	(3)	(4)

17. I think of myself as a strong person.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

18. I can make unpopular or difficult decisions.

not true at all	rarely true	Sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

19. I can handle unpleasant feelings.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

20. I have what it takes to act on a hunch.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

21. Strong sense of purpose

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

22. I am in control of my life.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

23. I like challenges.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)

24. I work to attain my goals.

not true at all	rarely true	sometimes true	often true	true nearly all of the time
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(0)	(1)	(2)	(3)	(4)
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25. I take pride in my achievements

not true at all	rarely true	sometimes true	often true	true nearly all of the time
(0)	(1)	(2)	(3)	(4)