5-2012

Dispositional Resilience and Person-Environment Fit as Predictors of College Student Retention

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DISPOSITIONAL RESILIENCE AND PERSON-ENVIRONMENT
FIT AS PREDICTORS OF COLLEGE
STUDENT RETENTION

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Industrial-Organizational Psychology

by
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May 2012

Accepted by:
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ABSTRACT

As more students drop out of college and the cost of leaving school without a degree rises, it becomes increasingly critical to help match students to a school that will educate them and facilitate graduation. While the college student retention literature has formulated a number of ideas and theories about how this may be accomplished, the current study uses an idea from the psychological literature, person-environment fit, in order to understand the role of an individual's fit with their college environment on student success. The current study examines individual differences in resilience as well as those in preferences for the presence or absence of environmental variables. Comparing an individual's desire for (the absence of) particular features of the college environment to whether or not they are at a school with (or without) those attributes creates a measure of fit. The Job Demands-Resources (JD-R) model is used to explore the role that dispositional resilience and job demands such as a lack of fit between an individual's preferences and objective environmental features play in affecting student retention and adjustment.

The current study hypothesizes that resilience will be most effectively measured by a single factor resilience model comprised of hardiness, core self-evaluations (CSE), and positive psychological capital (PsyCap). It is further hypothesized that resilience and good fit will individually and interactively predict higher commitment, better adjustment, and fewer intentions to leave a school. It is also hypothesized that fit will be of particular importance in predicting outcomes for students in the first half of their college careers.

All of the hypotheses were tested utilizing an archival data set collected from three diverse colleges and universities. Factor analyses led to the creation of a new six factor resilience model comprised of facets from all three composite constructs as well as nine dimensions of college fit. These fit dimensions as well as the resilience dimensions predicted all of the retention-related outcomes. Additionally, there were some significant interactions between fit and year in school as well as fit and resilience, the majority of which showed that individuals high in fit and resilience showed the greatest levels of adjustment to college and lowest levels of intentions to transfer.

Results supported the importance of both fit and resilience for understanding retention as well as the different roles fit plays for those in their first two years of college compared to those later in their college careers. These results also underscored the importance of resilience, particularly the purpose dimension addressing how students make meaning from their lives, for understanding student retention. Contributions, limitations, and future directions are discussed.

DEDICATION

I dedicate this dissertation to my parents, Rick and Mindy, and my sister, Sara. You all have believed in me and reminded me that I can grow up to do whatever I want. And it won't be long before there's another Dr. Waitsman! I'll like you forever and I'll love you for always. And hopefully you get the reference this time around, dad. But no matter what, I love you.

This dissertation is also dedicated to my partner, teammate, and best friend, Anthony. I am so lucky to have you in my life, through the tough decisions and bad days, frustrations and sleep-deprived days, this dedication is not nearly enough thanks for all the support you have provided me with on this journey. I love you and I can't wait for the next adventure!

ACKNOWLEDGMENTS

I owe an enormous debt of gratitude to so many people, but none more than my advisor, Dr. Robert Sinclair. His guidance and knowledge have proved invaluable as I made the tough decisions, chose the future, and pursued the most vibrant life.

I am also grateful to Rick Heller and John-David McKee of Umatch Risk Management for Colleges & Universities. Without them, this project truly would not have been possible. I could not have asked to be part of a better, more enthusiastic, and genuinely caring team.

Thank you also to my dissertation committee. Dr. Patrick Raymark has handled so many of my questions and concerns with endless patience and he still agreed to be part of a team that had to read this lengthy dissertation. Dr. Patrick Rosopa provided so much statistical knowledge to me both now and as a part of my thesis committee. And Dr. Cindy Pury helped me see so many uses for this research and provided expert advice on positive psychology in addition to her advice and support when I first started teaching. They have taught me so much throughout my graduate school career and their help with this dissertation was just a small part of all that they've taught me.

Lastly, my friends and family have provided so much support to me over the years and I will forever be grateful to them. Hopefully, at the completion of this project, I'm a little closer to becoming the person that Max and Bella already think I am. Thank you all for being a part of my life and sticking with me through these challenging years and making them a lot more fun!

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CHAPTER ONE

INTRODUCTION

While the importance of a college education has long been recognized, students still depart from colleges and universities before earning a degree at an alarming and costly rate. Failing to earn a college degree costs universities, taxpayers, the government, and, students themselves. According to the U.S. Census Bureau, young adults between the ages of 25 and 34 who have a college degree and work year-round earn approximately 40 percent more than their peers with only some college experience (Knapp, Kelly-Reid, & Ginder, 2011). Additionally, these degree earners earn about two-thirds more than their peers with only a high school degree (Knapp et al., 2011).

This trend will only continue to impact more people as the number of college graduates remains surprisingly low. U.S. Census data indicates that only about 57 percent of full-time, first-time students seeking a bachelor's degree or an equivalent degree will complete their degree at the institution where they first enrolled within 6 years (Aud et al., 2011; Knapp et al., 2011). An August 2011 report from the American Institutes for Research reported that students who enrolled in college in the fall of 2002, but failed to graduate six years later, cost the nation approximately $3.8 billion in lost income, $566 million in lost federal income taxes, and $164 million in lost state income taxes (Schneider & Yin, 2011). Thus, the costs of college dropouts are enormous and clearly affect a variety of stakeholders.

Similarly, the costs of transferring from one university to another are enormous, particularly when costs are measured in terms of time and additional courses. Individuals

attending two-year community colleges are less likely to earn a bachelor's degree than those who begin their college education at a four-year institution (Dougherty, 1991; Schneider & Yin, 2011). This is due, at least in part, to the difficulties associated with transferring (Dougherty, 1991; Laanan, Starobin, & Eggleston, 2010-2011). This has led some researchers to advocate for the end of two-year colleges in favor of converting them to four-year schools (e.g., Dougherty, 1991; Pascarella, Bohr, Nora, & Terenzini, 1995). It is clear that low retention rates create a number of problems and issues for students past and present, educators, policymakers, and taxpayers. Thus, it is critical to get a better understanding of the processes at work when students leave a school before obtaining a bachelor's degree.

The current study utilizes several important constructs and builds on research from industrial and organizational psychology and occupational health psychology in order to better understand student retention. Specifically, the current literature review and study uses the person-environment fit literature to predict student retention. The job demands-resources (JD-R) model is used to understand how environmental demands – conceptualized as areas of low fit between an individual's preferences and environment – and resources like dispositional resilience – comprised of several composite constructs – both influence student retention.

Job Demands-Resources (JD-R) Model

The job demands-resources (JD-R) model proposes that job demands are predictive of physiological and psychological costs, while job resources predict engagement (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands may be

defined as "physical, social, or organizational aspects of the job that require sustained physical or mental effort and therefore associated with certain physiological and psychological costs (e.g., exhaustion)" (Demerouti et al., 2001, p. 501). Job resources, on the other hand, have been defined as "physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands at the associated physiological and psychological costs; (c) stimulate personal growth and development" (Demerouti et al., 2001, p. 501).

Further, Demerouti and her colleagues have distinguished between external resources that are related to the organizational or social environment and internal resources, which refer to the individual's cognitive features and action patterns or personality (Demerouti et al., 2001). Thus, dispositional resilience in the current study is compared to internal resources in the JD-R model research. The JD-R model has been used to demonstrate that burnout applies to individuals in occupations outside of the human services sector and in order to demonstrate distinct relationships with differing facets of burnout (Bakker & Demerouti, 2007; Demerouti et al., 2001).

One reason the JD-R model is relevant to the current study is because it has been used to show that personality affects negative and positive job-related outcomes through its effect on job demands and resources (Bakker, Boyd, Dollard, Gillespie, Winefield, & Stough, 2010). For example, Bakker, Boyd, et al. (2010) demonstrated that job demands predicted health impairment while job resources predicted organizational commitment, but neuroticism predicted health impairment directly and through its effect on job

demands. Similarly, extroversion predicted organizational commitment directly and through its effect on job resources (Bakker, Boyd, et al., 2010).

A number of studies have confirmed that demands, or potential stressors for the individual, are related to burnout and negative outcomes such as turnover intentions and reduced organizational commitment, in part through the relationship between demands and burnout (e.g., Bakker & Demerouti, 2007; Hakanen, Schaufeli, & Ahola, 2008; Hu, Schaufeli, & Taris, 2010; Korunka, Kubicek, Schaufeli, & Hoonakker, 2009). It is easy to see how these demands might include aspects of the environment that are undesirable – specifically, when desirable aspects of the environment are absent or those not desired are present. Thus, the presence of poor fit between an individual's preferences and the college environment are considered demands in the current study.

Studies have confirmed that resources or motivational variables are related to engagement and desirable outcomes, in part through the relationship between resources and engagement (e.g., Bakker & Demerouti, 2007; Hakanen et al., 2008; Hu et al., 2010; Korunka et al., 2009; Mauno, Kinnunen, & Ruokolainen, 2006). These resources and motivational variables may themselves buffer individuals from the effects of stressors (e.g., Bakker & Demerouti, 2007; Bakker, Demerouti, & Verbeke, 2004). Thus, dispositional resilience is a type of resource, shown to buffer individuals from the effects of stressors (e.g., Judge & Hurst, 2008; Khoshaba & Maddi, 1999; Kobasa, 1979).

The JD-R model has mostly been used to predict engagement and burnout, but the current study utilizes a college environment, and thus, the outcomes of interest are different. In particular, instead of burnout and engagement, the current research is

interested in predicting retention. Thus, the outcomes used are organizational commitment, adjustment to college, and intentions to leave or transfer. There is some empirical support for this. Specifically, research has shown that working conditions or demands are related to organizational commitment (Bakker, Boyd, Dollard, Gillespie, Winefield, & Stough, 2010; Bakker, Van Veldhoven, & Xanthopoulou, 2010).

The current study utilizes this model of demands and resources and applies it to a student population and the college environment, as well as the concept of fit, another idea from industrial and organizational psychology literature. Specifically, the current study hypothesizes that the presence of undesirable conditions or potential stressors, such as a perceived lack of fit between the individual and the environment, is positively related to negative outcomes such as reduced organizational commitment and increased intentions to leave or transfer from the school. Conversely, the presence of resources important to the student, as reflected by better fit between individuals and the environment and resilience are positively related to desirable outcomes such as engagement, adjustment, and commitment.

The JD-R model provides additional support for the second and third hypotheses, the proposed connections between fit, resilience, and student retention-related outcomes. Essentially, the JD-R model provides empirical support for the idea that the presence of resources may buffer individuals from disengagement and other undesirable outcomes, while the presence of demands without resources is associated with stress. Thus, the current study proposes that resilience will buffer individual from stressors and negative events and thus predict their commitment to their schools. Similarly, the presence of fit is

considered a resource, which will also buffer the effects of negative events and help the student remain committed to their school.

Another important part of the JD-R model hypothesizes that the interactions between these demands and resources predict well-being (Bakker & Demerouti, 2007; Bakker, Van Veldhoven, & Xanthopoulou, 2010). Thus, the current study utilizes this proposition and hypothesizes an interaction between dispositional resilience – a resource – and the degree of congruence between an individual's desired college environment and objective environment – or job demands. This interaction predicts the important outcomes of study – intentions to leave or transfer, organizational or school commitment, and adjustment to college.

CHAPTER TWO

PERSON-ENVIRONMENT FIT

Person-environment (PE) fit refers to the relationship between individuals and their surroundings (Ostroff & Schulte, 2007). The concept of fit has permeated the industrial and organizational psychology literature in recent decades largely because of the underlying hypothesis in fit literature, that when characteristics of an individual match those of his or her surroundings, positive outcomes result. Some of the credit for the popularity of fit research comes from its historic roots. Specifically, fit is the manifestation of interactional psychology (Kristof-Brown, Zimmerman, & Johnson, 2005) as well as Lewin's formula for human behavior, B = f(P,E), where B refers to behaviors, which is a result of both the person (P) and the environment (E) (Lewin, 1943). Perhaps due in part to these roots, fit research has become "one of, if not the, dominant conceptual forces in the field" (Schneider, 2001, p. 142). Schneider once claimed that "if person-environment fit is not the explicit key to our understanding of behavior, it is the implicit key" (2001, p. 142).

However, fit has been conceptualized as values and personality as well as a variety of other concepts, with numerous researchers deeming it a construct that "defies definition" (Edwards & Billsberry, 2010, p. 476) and as a "syndrome with many manifestations" (Schneider, 2001, p. 142). Although fit, correspondence, and congruence are used interchangeably in the current literature, the popularity of each term differs depending on the discipline of the researcher, thus adding to the segmentation and confusion in the literature (Tinsley, 2000).

The first summaries and reviews of fit literature focused on several types of PE fit, including person-organization (PO) and person-job fit (PJ; Cable & DeRue, 2002; Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). PE fit is most often defined as the congruence of an individual with his or her surroundings (Kristof, 1996). Surroundings may refer to a team or group, supervisor, organization, job, department, or other part of an individual's work environment (Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). A recent meta-analysis filtered down the long list of environment variables into four "critical domains" or types of PE fit: person-organization, person-group or person-team, person-job, and person-supervisor fit (Kristof-Brown, Zimmerman, & Johnson, 2005). Each of these domains may be considered in terms of any number of variables, assessed at multiple levels, and thus it is easy to see how fit has become such an elusive construct.

However, the long list of ways of measuring and conceptualizing different types of fit have led to difficulty understanding and mastering the literature and even more difficulty putting the research into practical use. In order to best understand the literature and its debates, fit research may be considered and discussed in more depth in terms of three main issues: conceptualizations about fit, operationalization of content domains, and strategies for measuring fit.

Conceptualizations of Fit

There are two main ways fit may be conceptualized: needs-supplies or supplies-values and demand-ability match (Edwards, 1993; Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). These two models use fit, or the lack thereof, to explain

stress using both environmental and individual difference variables (Edwards, 1996; Edwards & Harrison, 1993). While these two definitions are often a distinction made only when examining the fit between a person and a job, PJ fit, both conceptualizations may be used for any type of fit.

The supplies-values or S-V model posits that stress results from a lack of fit between an individual's preferences (i.e., values) and the environmental resources (i.e., supplies) available to fulfill those values. In this model, values refer to conscious desires, which actually encompass an individual's preferences, as well as his or her interests, motives, and goals (Edwards, 1996). Proponents of this model argue that S-V fit is a process whereby an individual compares his or her desired values to the perceived amount, quality, or frequency of conditions or supplies available (Edwards, 1996; Resick, Baltes, & Shantz, 2007). As the gap between the desired and perceived increases, so does the strain the individual experiences. S-V fit is at work when a compassionate individual with years of volunteer work seeks out a position at a company that has made significant contributions to the community and considers charity part of its corporate mission because the individual and the organization have congruent values, thus S-V fit is high.

S-V fit is often used when measures of health and well-being and related variables are the focus of the study (Kristof-Brown, Zimmerman, & Johnson, 2005). Some researchers have argued for processes whereby strain increases when supplies are in excess (Edwards, 1996). This last idea will not be discussed in depth here because it is not expected to have an effect on the current research. Specifically, because of the way

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supplies are operationalized in the current study, it will be difficult for an excessive amount of supplies or lack of fit to be present.

Demands-abilities fit refers to the comparison of an individual's skills to environmental needs (Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). This means that when demands-abilities fit is high, an individual has the skills and abilities needed to meet the requirements of the organization. According to this model, abilities refer to skills, knowledge, abilities, and other characteristics (KSAOs), as well as time and energy that an individual uses to meet environmental demands (Edwards, 1996). Abilities may also refer to characteristics that may be improved with use, such as knowledge and skills, or depleted by use, such as energy. Demands refer to both quantitative and qualitative requirements placed on an individual and may refer to objective rules or social constructions or codes, such as group norms for behavior (Edwards, 1996). For example, if a firm of lawyers hires an accountant to handle taxes and monetary issues for the group, these lawyers are hiring an individual based on the idea of demands-abilities fit. Because the accountant has knowledge of money and financial matters, he or she will bring unique and critical knowledge and skills to the group.

S-V fit is often preferred from a conceptual viewpoint for several reasons, but most notably because of what many perceive to be a flaw in the D-A model. Specifically, some proponents of the D-A model have insisted that the misfit between demands and abilities is related to strain only when a failure to meet demands leads to what the individual perceives to be as negative costs (Edwards, 1996; Edwards & Cooper, 1990).

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Edwards (1996) argued that these costs signal S-V misfit because the individual is judging supplies to be inadequate for obtaining or keeping something of value, much like the way the S-V appraisal process is said to function. Thus, D-A misfit causes strain only when this misfit causes S-V misfit. For example, if a lawyer wants to do 20 hours of pro bono work per month in order to meet Bar Association goals, yet he is struggling to find any clients to hire him for pay or pro bono, there is a gap between what he wants to do and what he can do in terms of work hours. Those who argue for the S-V model's superiority would claim that the strain the lawyer feels is because of the gap between the supplies or clients, and values or goals. In this example, the discrepancy between what the Bar Association requires and what the lawyer is able to do causes discomfort or strain. Proponents of the S-V model might claim that without the lawyer's desire to meet Bar Association goals, there would be no strain.

This more complicated relationship between D-A misfit and strain leads to the hypothesis that the relationship between S-V misfit and strain is stronger than the one between D-A misfit and strain because the latter relationship is mediated by the former (Edwards, 1996). Similar results have been hypothesized for the prediction of dissatisfaction (Edwards, 1996). Empirical tests of these theory-driven predictions have confirmed that S-V fit is a better predictor of dissatisfaction than D-A fit, while D-A fit is more strongly linked to tension and physiological variables related to strain (Edwards, 1996; Edwards & Harrison, 1993). This leads to the claim that S-V fit is more related to pleasure and satisfaction, while D-A fit is tied to arousal (Edwards, 1996; Edwards & Harrison, 1993). Similarly, Cable and DeRue (2002) have found evidence that S-V fit

perceptions are related to job- and career-centered outcomes such as job and career

satisfaction, as well as occupational commitment, while D-A fit perceptions were not.

Because the outcomes of interest in the current study are more closely related to

satisfaction rather than physiological strain, the present research utilizes the S-V fit

model to make predictions about PE fit. Perhaps the most common use of the S-V and D-

A fit models concerns the prediction of the separate combinations of P and E, as well as

their interactive effects (e.g., Chang, Chi, & Chuang, 2010; Chatman, 1989; Edwards &

Billsberry, 2010; Edwards, Caplan, & Harrison, 1998; Edwards & Harrison, 1993). The

exact nature of S-V and D-A fit is beyond the scope of the current study, but it is

important to review them here because much of this research forms the basis for use of fit

models in occupational health and stress research. Additionally, this research is reviewed

here because it suggests the cognitive nature of the fit, another reason fit and resilience

should be considered in the same research as in the current study.

Supplementary Versus Complementary Models

Many reviews of fit focus on supplementary compared to complementary fit. That

is, researchers must choose to focus on how an individual either brings some new

characteristic or skill to an environment, or how an individual adds more of the same

attribute, already present there, to his or her surroundings (e.g., Kristof-Brown, Barrick,

& Stevens, 2005; Ostroff & Schulte, 2007; Piasentin & Chapman, 2007). High

supplementary fit refers to situations in which an individual and an organization have

similar characteristics and/or values. High complementary fit refers to situations in which

"the weakness or needs of the environment are offset by the strength of the individual,

and vice-versa" (Munchinsky & Monahan, 1987, p. 271). In this context, strengths and characteristics of the individual refer to his or knowledge, skills, and abilities.

Specifically, the supplementary fit approach is used when considering how an individual's personality or values match those of an organization or environment (Cable & Edwards, 2004; Muchinsky & Monahan, 1987; Westerman & Cyr, 2004). The complementary fit approach dominates conceptualizations of fit where an individual's skills are compared to an environment, as in personnel selection decisions (Muchinsky & Monahan, 1987; Westerman & Cyr, 2004). For example, in selecting individuals to complete a project together, using the complementary fit approach, individuals with a variety of different skills – all of which are required to complete the task – would be selected so that the combination of their talents could be used to create the best possible product.

Complementary fit is often the reason that personality characteristics are present in moderation in a group (Muchinsky & Monahan, 1987; Kristof-Brown, Barrick, & Stevens, 2005). That is, it may be best not to have an entire group of gregarious extraverts with no one to listen to them. Indeed, Kristof-Brown, Zimmerman, and Johnson (2005) found that individuals are most attracted to their work teams when there is complementary fit on extraversion such that the individual is high on extraversion, but not the team, or vice versa. Nonetheless, a meta-analytic review of Big 5 traits as they relate to teams suggested very little support for the idea that teams with positive outcomes did not tend to have complementary levels of Big 5 traits between members (Prewett, Walvoord, Stilson, Rossi, & Brannick, 2009).

Complementary fit is most frequently assessed in terms of team or organizational level outcomes. Essentially, assessing the presence of complementary fit involves determining whether the entire group or organization has the skills and abilities to perform a desired function (Muchinsky & Monahan, 1987). However, more contemporary research has assessed complementary fit using the psychological need fulfillment model and focused on whether a group or team is able to meet the needs of the individual (Cable & Edwards, 2004). Thus, the shift in this research has been away from meeting organizational goals and towards the importance of meeting individual needs.

The current study focuses on supplementary fit and complementary fit is discussed mainly because it is an important part of the fit literature. Supplementary fit is used in the current research, however, because of the variables examined. In this study, the focus is on the match between students and a college environment, using the student's values, personality, and academic interests as fit criteria. Research suggests that congruent matching on these variables is linked to the most positive outcomes. Extraversion is the only variable here that has been used to predict desired outcomes when there is complementary fit, and then it is usually only in the case of a workgroup or team, neither of which is the focus here. Additionally, supplementary fit is usually assessed in terms of individual satisfaction and tenure (Muchinsky & Monahan, 1987), two of the key outcomes in the current study.

Logically, it is easy to understand why supplementary fit will best predict positive outcomes for students in the current research. In measuring fit in the current study, students are asked about what they would like in a college campus, or how important it is

that a school has a given attribute. This is akin to asking students about the values they would like in an organization and thus, because value congruence is part of the supplementary fit model, it is reasonable to hypothesize that students with a better match on these values will have more positive outcomes. The current study is also part of a recent trend in applying concepts from industrial and organizational psychology literature to the college environment. For example, previous studies have used work-family and work-life balance research to understand work-school conflict (e.g., Butler, 2007; Butler, Dodge, & Faurote, 2010; McNall & Michel, 2011) and school commitment (e.g., Eitle & Eitle, 2007; McNally & Irving, 2009). This is one reason the current study utilizes commitment to one's school as an important outcome.

It is perhaps easiest to understand this logic in terms of an example. For instance, a student who loves going to football games on the weekend and cheering for his or her team would be best served by attending a larger university with Division I athletics, or at least a school large enough to include a football team. In this case, the student will be happier at a university with a football team and others who value athletics so that he can attend football games and tailgates, rather than being the only one with an interest in sports at that school.

Objective Versus Subjective Fit

Fit has been measured in a variety of different ways, but the primary distinction is between objective and subjective fit. Kristof (1996) defined objective fit as "actual" fit measured indirectly (p. 11). These indirect measurements require separate ratings of the individual and the environment, which are then compared. This comparison may be

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calculated in several ways, from interactions to difference scores and polynomial regressions (Kristof, 1996).

Subjective fit refers to an individual's perception, beliefs, or judgments about congruence (Kristof, 1996; Piasentin & Chapman, 2006). This type of fit may be completely independent of reality because it is an abstract personal idea and requires no separate measurement. That is, an individual may believe that he and his employer share a focus on teaching, but his employer may prioritize research. In this case, fit may still be high because the individual believes his values match those of his employer. The fact that he is incorrect in this assessment does not affect subjective fit, though it would obviously affect objective assessments.

Even though both objective and subjective measures attempt to assess the same type of fit, the true fit between an individual and his or her environment, there are obviously a number of influences and reasons why the two may differ and thus it is important to consider how they vary (Judge & Cable, 1997). Multiple meta-analyses have shown that subjective fit is a stronger predictor of job attitudes than objective fit (Kristof-Brown, Zimmerman, & Johnson, 2005; Verquer, Beehr, & Wagner, 2003). However, the current study uses an objective measure of fit because such a measure is more useful in the application of this research in predicting students who will enroll at a school and graduate from it.

An additional advantage of the current research concerns the nature of the timing of the measures. The literature suggests that the timing of attitude and fit measures does not have a significant moderating effect on fit-outcome relationships except in the case of

organizational commitment (Kristof-Brown, Zimmerman, & Johnson, 2005). However, in this case, relationships were stronger when measures were administered simultaneously or close together (Kristof-Brown, Zimmerman, & Johnson, 2005), as in the current study.

Fit as a Multidimensional Construct

Fit research is incredibly complex and a large part of the social science literature not only because it crosses so many academic disciplines, but also because it can examine so many different levels of both the person and the environment. For example, person-organization fit is only one type of fit, yet the way that the organization is operationalized can take on a number of different forms. Specifically, "the organization" may refer to characteristics such as culture or climate, values, goals, and norms as well as the organization's demands for resources and personnel knowledge, skills, and abilities and organizational supplies and opportunities (Kristof, 1996). Then, the person part of the fit approach must be measured and this side of the equation might involve personality, values, goals, and attitudes, as well as the individual's supplies and demands (Kristof, 1996). Thus, there are seemingly endless combinations of levels of analysis within only one of the major types of fit research, and these combinations do not even consider supplementary versus complementary fit perspectives or needs-supplies compared to demands-abilities perspectives and models, which expand the domain space of this area of literature (Kristof-Brown, Zimmerman, & Johnson, 2005).

Beyond this, fit may be measured subjectively or objectively in relation to the environment, supervisor, job, or team. Thus, there are a number of combinations and

ways fit may be measured. However, fit is perhaps best reviewed and understood by examining each of the critical domains identified by a recent meta-analysis (Kristof-Brown, Zimmerman, & Johnson, 2005).

Domains of Fit

Person-organization fit. Perhaps the widest area of study in the PE fit literature, person-organization fit also has a variety of definitions. However, the most popular definition of PO fit is the compatibility between individuals and organizations, where compatibility may refer to either supplementary or complementary fit (Kristof, 1996). Some of the earliest work in this area examined the congruence between personality and organizational climate (e.g., Tom, 1971). A number of researchers have used this definition, but Chatman's (1989) research helped urge researchers to consider the congruence between individual and organizational values.

The development of the Organizational Culture Profile (OCP; O'Reilly, Chatman, & Caldwell, 1991), a tool to assess values, helped facilitate this line of research and promote a focus on values. Value congruence is now considered the most widely accepted operationalization of PO fit (Kristof-Brown, Zimmerman, & Johnson, 2005; Verquer et al., 2003). Goal congruence is the main alternative conceptualization rather than culture, though it is still less popular than value congruence (Kristof-Brown, Zimmerman, & Johnson, 2005).

PO fit may be the most widely researched type of PE fit, perhaps due to the impressive correlations between measures of PO fit and important job attitudes and outcomes. Recent meta-analyses have demonstrated strong positive relationships between

PO fit and organizational commitment, $\rho = .31$ (Verquer et al., 2003) and $\rho = .51$ (Kristof-Brown, Zimmerman, & Johnson, 2005). PO fit and job satisfaction had an unbiased population correlation of .28 (Verquer et al., 2003), though more recent estimates suggest the relationship may be closer to .44 (Kristof-Brown, Zimmerman, & Johnson, 2005). PO fit was negatively related to turnover intentions with an unbiased population correlation, $\rho = -.21$ (Verquer et al., 2003). The more recent meta-analysis demonstrated a relationship between PO fit and intent to quit of -.35 (Kristof-Brown, Zimmerman, & Johnson, 2005).

Kristof-Brown, Zimmerman, and Johnson (2005) also included the relationship between PO fit and several other work-related variables in their meta-analysis. While relationships between PO fit and job satisfaction, organizational commitment, and turnover intentions were strongest, there were still fairly strong correlations between PO fit and organizational citizenship behaviors (OCBs), $\rho = .27$, and strain, $\rho = -.27$. Thus, it is easy to see why fit has become the focus for so many researchers in organizational psychology. PO fit had weaker correlations with job performance, $\rho = .07$, task performance, $\rho = .13$, tenure, $\rho = .03$, turnover, $\rho = -.14$, and organizational withdrawal, $\rho = -.05$. These results also provide some of the rationale for the current study's focus on fit and commitment or retention.

Of particular relevance to the current study is the finding that the method of measurement for the environmental characteristics significantly moderated the relationship between fit and job satisfaction and organizational commitment. Specifically, when the environment was assessed as an aggregation of personal characteristics, the

relationship between fit and job satisfaction ($\rho = .30$ compared to $\rho = .22$) and fit and

organizational commitment ($\rho = .28$ compared to $\rho = .16$) were stronger than when

aggregate ratings of the organization were used (Kristof-Brown, Zimmerman, & Johnson,

2005). The current study's environmental assessments are closer to aggregations of

organizational ratings and thus if any relationships are found, it suggests that results

might have been even stronger had a different type of environmental measure been used.

Westerman and Cyr (2004) filtered PO fit into 3 dimensions: values congruence,

personality congruence, and work environment congruence. Value congruence refers to

the similarity between an individual's values and that of the organization (Westerman &

Cyr, 2004). Personality congruence referred to supplementary fit measures or how well

an individual's personality matches up to an ideal "personality prototype" (Westerman &

Cyr, 2004, p. 253). Work environment congruence referred to the match, or lack thereof,

between needs and supplies (Westerman & Cyr, 2004). In their study of these

dimensions, Westerman and Cyr found that all three dimensions of PO fit were related to

employee intentions to stay with their current employer. Additionally, the study

demonstrated that values and work environment congruence had the strongest positive

effects on both commitment and satisfaction outcomes.

Person-group fit. Person-group (PG) fit refers to the relationship between an

individual and a work group or team. This type of research often draws on teams and

teamwork literature, as well as group and social psychology. What makes PG fit research

different from some of this similar research is that PG fit focuses on individual-level

outcomes, such as how similarity to one's group members affects job satisfaction. Group

and social psychology often focuses on the group or unit level (Kristof-Brown, Zimmerman, & Johnson, 2005). PG fit is fairly similar to other types of fit, often examining fit in terms of demographic and personality similarity (Kristof-Brown, Zimmerman, & Johnson, 2005). This focus on demographic similarity is not considered in the present study because past research has demonstrated that demographic characteristics are a surface level variable and do not predict outcomes as well as deeper-level characteristics (Harrison, Price, & Bell, 1998). Demographics are considered surface level because they are not intrapsychic and have little to no relationship with cognitive processes. Because most fit researchers do not address demographic similarity, many have instead chosen to examine PG fit in terms of values or goal congruence (e.g., Kristof-Brown & Stevens, 2001). Others have argued that these demographic variables are also simply proxies for personality, values, and culture, among other variables (Kristof-Brown, Zimmerman, & Johnson, 2005).

In their meta-analysis, Kristof-Brown, Zimmerman, and Johnson (2005) found the strongest relationship between PG fit and job satisfaction, $\rho = .31$. Organizational commitment had a weaker relationship with PG fit, $\rho = .19$. Intent to quit was inversely related to PG fit, $\rho = -.22$. Kristof-Brown, Zimmerman, and Johnson (2005) found that PG fit is strongly associated with coworker satisfaction and group cohesion, $\rho = .42$ and .47, respectively. PG fit has a slightly weaker relationship with supervisor satisfaction, $\rho = .28$, and even weaker relationships with overall performance, $\rho = .19$, and OCBs, $\rho = .23$, though obviously these are still important relationships worthy of study. However, Kristof-Brown, Zimmerman, and Johnson (2005) have cautioned that this is the newest

form of fit research, thus there is a relatively small amount of research available, compared to the other areas of fit literature.

Person-supervisor fit. Person-supervisor fit refers to the match an individual has with his or her boss or immediate superior. The idea that fit is dynamic rather than static, a discussion which will be explored further later, is perhaps best demonstrated by this type of fit, where it is easy to imagine constant change in a dyadic relationship. This type of fit is complicated by the fact that it draws from a variety of sub-disciplines and psychological specialties, including social psychology, teams, group psychology, leader member exchange (LMX), and mentoring. However, none of those areas are specifically considered here because they do not focus solely on the similarity of the individual and his or her supervisor, but often look at the relationship and interaction between the two. Additionally, this type of fit may be operationalized as congruence of values, personality, and /or goals, as well as perceptual similarity (Kristof-Brown, Zimmerman, & Johnson, 2005; Pulakos & Wexley, 1983). Unfortunately, because of the number of related topics, there is relatively little research examining the strict person-supervisor fit relationship in the same way that other types of fit have been studied.

Nonetheless, these studies suggest a variety of positive outcomes for both supervisor and subordinate are associated with a high degree of similarity between the two people. For example, Schaubroeck and Lam (2002) found that in groups high on collectivism, supervisor-subordinate personality similarity was a significant predictor of subordinate advancement. Strauss, Barrick, and Connerley (2001) found that perceived similarity on the Big Five personality traits had a strong, positive relationship to

performance ratings of the subordinate. In their meta-analysis, Kristof-Brown, Zimmerman, and Johnson (2005) found that this type of fit had a strong positive relationship with job satisfaction, $\rho = .44$, and supervisor satisfaction, $\rho = .46$.

Other research has demonstrated the importance of supervisor-subordinate value congruence in forming high quality relationships, or LMXs, as demonstrated by the positive relationship between value congruence and LMX (Erdogan, Kraimer, & Liden, 2004). Additional research has shown that PS fit is positively correlated with organizational commitment and negatively related to turnover intentions for organizational newcomers (Van Vianen, 2000). More recent research has demonstrated that the fit-commitment relationship works through LMX (Van Vianen, Shen, & Chuang, 2011). That is, employee and supervisor fit perceptions are related to organizational commitment through their influence on LMX.

Conversely, there are a variety of negative outcomes associated with lower degrees of fit between supervisor and subordinate. Pulakos and Wexley (1983) found that when both managers and subordinates perceived less perceptual similarity with each other, the pairs had significantly lower performance appraisal ratings. Research also suggests that higher levels of fit may buffer employees from the impact of negative events. For example, Witt (1998) found that congruent goals can buffer the negative impact of politics on employees. Overall, research demonstrates that person-supervisor fit is an important construct for researchers and one that proves valuable to organizations and individuals because of its relationship to valuable outcomes.

Person-vocation fit. Person-vocation (PV) fit refers to the relationship an individual has with his or her chosen career field or industry and is sometimes referred to as person-industry (PI) fit. This area of research is often omitted from personnel psychology research, excluded from meta-analysis and reviews (e.g., Kristof-Brown, Zimmerman, & Johnson, 2005) and often only examined by career and vocational counseling specialists. However, it is relevant to the current research, which examines career interests and colleges, but because it often cannot be separated from research on vocational choice and counseling, it is discussed in more depth in the section on John Holland's work and vocational theory.

Person-job fit. Person-job (PJ) fit refers to the match between an individual and the tasks, requirements, knowledge, skills, abilities, and other attributes of a specific job (Carless, 2005). As mentioned earlier, PJ fit is often divided into demands-abilities and need-supplies or supplies values conceptualizations. However, PJ fit is reviewed as a whole here because not all past research focuses specifically on one definition. This is consistent with existing literature reviews which have grouped both types of research together because even though some explicitly claim to use a particular conceptualization, both types of studies often utilize nearly identical measures of fit, usually needs or KSAs (Kristof-Brown, Zimmerman, & Johnson, 2005).

PJ fit is the foundation for most selection systems and a goal for most organizations that place a high value on achieving the best possible selection system (Sekiguchi, 2004). In fact, PJ fit perceptions are related to intentions to accept a potential job offer during the middle and at the end of the selection process, though the mid-

selection relationship is mediated by organizational attraction (Carless, 2005; Kristof-Brown, Zimmerman, & Johnson, 2005). Individual impression management tactics also influence interviewer perceptions of applicant PJ fit (Kristof-Brown, Barrick, & Franke, 2002). After selection, PJ fit may be used to promote positive outcomes by guiding job design (Erhart, 2006; Oldham, Hackman, & Pearce, 1976).

PJ fit highlights the issues in timing of measurements in this research. Much of the literature related to PJ fit reviewed here focuses on organizational attraction and selection and as such, fit is assessed before an individual becomes a part of the organization (e.g., Adkins, Russel, & Werbel, 1994; Cable & Judge, 1997; Kristof-Brown, Barrick, & Franke, 2002; Sekiguchi, 2004; Van Vianen, 2000). However, there is research, particularly assessing PO fit, that focuses on how an individual becomes a part of the organization, how fit may increase after a person is socialized into the organization (Cable & Parsons, 2001; Chatman, 1991; Kim, Cable, & Kim, 2005; Wang, Zhan, McCune, & Truxillo, 2011). After this socialization process occurs, fit is often highest because individuals who do not conform or adopt the views of the organization leave it, as is hypothesized in Schneider's attraction-selection-attrition (ASA) framework (Schneider, 1987; 2001; Schneider, Goldstein, & Smith, 1995). Thus, it is particularly important to assess fit when an individual is still new to the organization and either already fits into the organization or is in process of adapting or leaving. The current study addresses the importance of fit throughout the entire college process with particular interest in the beginning of one's college career because of this time period's predictive power.

Reviewing the outcomes associated with high PJ fit for incumbents explains why organizations are dedicated to improving it. A recent meta-analysis found that PJ fit had strong relationships with three critical job attitudes: job satisfaction ($\rho = .56$), organizational commitment ($\rho = .47$), and intent to quit ($\rho = -.46$; Kristof-Brown, Zimmerman, & Johnson, 2005). In that same meta-analysis, PJ fit was positively related to coworker satisfaction ($\rho = .32$), supervisor satisfaction ($\rho = .33$), and organizational identification ($\rho = .36$; Kristof-Brown, Zimmerman, & Johnson, 2005). Research has also demonstrated that PJ fit is inversely related to turnover intentions (Chang, Chi, & Chuang, 2010; Guan, Deng, Bond, Chen, & Chan, 2010). This research reinforces the finding that fit, with a variety of parts of the individual's environment, are related to satisfaction and intentions to stay in one's current position or quit.

Additional research demonstrates that a high degree of fit between an individual and his or her job may go beyond fulfilling the individual's psychological needs (Cable & Edwards, 2004) and actually produce further positive outcomes (Edwards & Cable, 2009). For example, research examining the congruence between nurses and their work environments found that high degrees of fit were positively associated with individual psychological empowerment, which includes meaningful work, competence, autonomy, and impact (Purdy, Laschinger, Finegan, Kerr, & Olivera, 2010). Studies such as these illustrate the importance of fit in predicting positive outcomes.

The Relationship Between Fit Domains

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Lauver and Kristof-Brown (2001) have argued for the complete separation of person-job (PJ) fit from person-organization (PO) fit, a distinction frequently made in the literature (e.g., Cable & DeRue, 2002). This argument is based on several convergent and discriminant validity studies which have shown a low correlation between the two types of fit as well as the differences in predictive power of the two types of fit and various outcomes (Cable & DeRue, 2002; Lauver & Kristof-Brown, 2001). For example, PO fit is a better predictor of intent to quit as well as organizational citizenship behaviors (OCBs) (Lauver & Kristof-Brown, 2001).

PO and PS fit perceptions also have distinct relationships with organizational commitment. Recent research has demonstrated that PO and PS fit perceptions have independent, additive effects on organizational commitment (Van Vianen, Shen, & Chuang, 2011). Kristof-Brown, Jansen, and Colbert (2002) demonstrated that PG, PJ, and PO fit all have significant, independent effects on satisfaction and individuals weight these dimensions and consider interactions between the types of fit in order to create a judgment about their overall fit at work. The idea that multiple types of fit are important to individuals and their overall judgments about satisfaction justifies the current study's focus on how well a student's preferences fit with several dimensions of the environment.

The Holland Model and Person-Vocation Fit

One last type of person-environment fit is person-vocation fit, or how similar and individual's interests and skills are to his or her industry or vocation of choice. Much of this research is based on John Holland's model of vocational choice, or the Holland Model, which divided vocations into several interest groups or types. According to

Holland, both personalities and vocations may be divided into six different categories including Realistic, Investigative, Artistic, Social, Enterprising, and Conventional or RIASEC (Holland, 1966, 1996). Holland has argued that when an individual's personality type or "person" is congruent with their environment or vocation, this leads to job satisfaction, career path stability, and greater job performance (Holland, 1996).

Each personality type has been described and defined in terms of preferences for activities and occupations, values, how an individual sees him or herself, how others see the individual, and what types of activities the person prefers to avoid. For example, an individual with a realistic personality type prefers activities involving the manipulation of machines, tools and things; "values material rewards for tangible accomplishments"; sees themselves as practical, conservative, and having mechanical skills – lacking social skills"; others see that individual as normal and frank; and this person avoids interactions with other people (Holland, 1996, p. 398). Thus, a person categorized as realistic might prefer a job involving manual labor with rewards and incentives based on personal accomplishments and little to no interaction with other people (see Table 1 for more information about each type).

When RIASEC types are applied to vocations or work environments, they may be defined in terms of what is required and demanded of the individual, what is rewarded, values or personal styles that may be expressed, occupations or environments involved, and several sample occupations. Thus, an environment considered realistic requires manual and mechanical competences, interactions with machines, tools, and objects; demands conforming behaviors and rewards practical accomplishments; values

"practical, productive and concrete values" while "robust, risky, adventurous styles" may

be shown; occupations involve "concrete, practical activity"; and include carpenter and

truck operators (Holland, 1996, p. 399). Thus, it is easy to see how Holland's theory

supports his conclusion that congruence between personality types and environments

yields positive outcomes and thriving individuals.

Indeed, Holland's propositions have been supported by research. For example,

meta-analytic research suggests that Holland personality types and environment types are

distinct, but related constructs (Armstrong & Vogel, 2009). Individuals in occupations

congruent with their personality, according to Holland's typology, have shown greater

job stability, even when a very diverse sample of census data is used (Gottfredson, 1977).

Meta-analytic research has supported the positive correlation between congruence and

satisfaction (Assouline & Meir, 1987).

Costa, McCrae, and Holland (1984) found that Holland types are related to three

of the Big Five – neuroticism, extraversion, and openness – even when spouse ratings of

personality were used to add another method of measurement. Similarly, the full Big Five

had some significant positive correlations with Holland types, including positive

correlations between social and enterprising preferences with extraversion, investigative

and artistic with openness, and conventional with conscientiousness (Gottfredson, Jones,

& Holland, 1993). Support for the value of congruence comes from research

demonstrating that individuals who remain in a given major or field are those with

personal characteristics most similar to others in that field (Holland & Nichols, 1964).

More recent research has suggested that there is great potential for the use of vocational interest in predicting employee performance and turnover (Van Iddekinge, Roth, Putka, & Lanivich, 2011). In their recent meta-analysis Van Iddekinge and his colleagues (2011) found that single interest scales had relatively strong relationships with job performance ($\rho = .14$), training performance ($\rho = .26$), turnover intentions ($\rho = -.19$), and actual turnover ($\rho = -.15$). This study also found that scales measuring interests related to a particular job or vocation were better predictors of these outcomes than were scales measuring RIASEC types.

While the Holland model and its legacy in person-vocation fit is an important part of the congruence literature, it is not directly relevant to the current study. Holland's focus is vocation and interests, while the present research focuses on the broader organization. However, the idea that one's interests predict positive outcomes is part of the rationale for the examination of individual interests and preferences for college environment as they relate to retention and other student outcomes.

Conclusion

Person-environment fit has long been a part of psychological literature and theory and has clearly become an important research topic in industrial and organizational psychology. While the Holland model has come close to bridging the gaps between psychological and social science disciplines, there is still a dearth of research applying the current models of P-O fit to students and the college environment beyond an academic major. Thus, the current research focuses on using what has been learned about

types of fit and models of fit in organizations to better understand student retention and

success.

CHAPTER THREE

THE COLLEGE ENVIRONMENT AND COLLEGE STUDENT RETENTION

College Student Retention

Many factors influence a student's decision to remain at a given college until graduation and while delineating the precise role of each has become a popular pursuit, there are still many questions that remain unanswered. One popular research perspective focuses on the role of personality and individual differences, while another assesses an individual's fit with college environments. The current study utilizes both fit and individual differences to predict retention. In order to examine the role of fit, however, it is important to understand the different aspects of the college environment. Students choose a college, much the way that potential employees selectively apply to different organizations and jobs. Similarly, the factors and variables a student considers in the selection process provide information about the way students evaluate the environment and form judgments about fit.

Of particular importance to the study of student retention is a more complete understanding of the first two years of college. The first year in particular has proved critical to predicting and understanding student retention (Goodman & Pascarella, 2006; Terenzini, Lorang, & Pascarella, 1981). The result has been a general understanding that increasing student involvement in the first year of college is crucial to improving retention (Tinto, 2006-2007). This research provides further justification for the current study's focus on students just beginning their college careers.

Additionally, research by Tinto (1975) and Bean (1985) have formulated research-based models of student retention demonstrating the importance of both environmental and personality factors that influence college choice and retention, a proposition supported by a large body of literature (e.g., Allen, Robbins, Casillas, & Oh, 2008; Cabrera, Nora, & Castañeda, 1993; Schertzer & Schertzer, 2004). Tinto (1975) has even proposed that retention is somewhat idiosyncratic. That is, Tinto has claimed that retention is specific to individual schools and the factors affecting retention are particular to that school. This research shows the importance of considering both person and environment in understanding college choice and retention and provides more justification for studying different factors that influence retention at each school rather than presuming the same factors affect retention everywhere. However, Tinto seems to have tempered his concerns in more recent research, suggesting that although the importance of different predictors of retention may vary depending on the school, the predictors themselves do not differ (Tinto, 2006-2007). The current research reflects the more updated perspective that predictors of college retention do not fundamentally differ, though they may vary depending on the institution.

Another reason the current study focuses on both personality and institutional characteristics in predicting retention is because of research showing a connection between personality and environmental preferences. Indeed, Judge and Cable (1997) were able to demonstrate that personality traits such as the Big Five were related to preferences for particular types of organizational cultures. Additionally, Judge and Cable (1997) have shown that both objective and subjective fit were related to organizational

attraction for job seekers. This study shows that personality can influence the type of environment an individual seeks out and thus supports the proposition that an individual's preference for a particular college or type of college environment is influenced by his or her personality. Indeed, models of choosing a college indicate that personality and individual differences influence school choice and will be reviewed next (e.g., Chapman, 1981; Shaw, Kobrin, Packman, & Schmidt, 2009).

College Search and Choice

Many researchers have explored the process by which high school students, along with their parents and guidance counselors, search for potential colleges and ultimately select one. Research has suggested a number of factors influence the choice of colleges, including distance from one's home (Mattern & Wyatt, 2009), academic fit (Mattern, Shaw, & Kobrin, 2010), cost of a college (Quigley, Bingham, Murray, & Notarantonio, 1999), financial aid, athletics, weather (Warwick & Mansfield, 2003), professors and academics (Mansfield & Warwick, 2005), as well as reputation or image of the school (Pampaloni, 2010). In fact, Pamplaloni (2010) found that these objective characteristics of the school and its environment are the most influential pieces of information for students making their college decisions.

Chapman's (1981) influential model of college choice explains that student characteristics, such as educational goals, as well as the student's expectations about college life influence student choice. The factors examined in a student's college choice point towards aspects of the college environment that are obviously important to individuals and thus form the basis for assessing one's fit with the college environment.

Because the current study focuses on the role of objective fit, variables related to the college environment itself form the dimensions of fit assessed in the current study. This is consistent with existing research describing institutional characteristics and how they relate to retention (e.g., Farrell, 2009; Pampaloni, 2010; Tinto, 2006-2007; Titus, 2004).

However, very few studies have actually examined the role fit plays in student retention. Mattern, Woo, Hossler, and Wyatt (2010) examined the role of student-institution fit in predicting GPA and graduation. However, these researchers found that fit was not a significant predictor of college success. But Mattern, Woo, et al. (2010) examined fit in a much more superficial way. First, Mattern Woo, et al. (2010) had only a few items to measure each type of fit, which included campus size, location, distance from home, four-year or two-year institution, co-educational or same-sex, and public versus private types of fit. This study did not include items assessing weather, financial aspects, and social fit. The current study assesses many more dimensions of fit as well as more proximal outcomes of fit designed to understand how students feel before and when they are thinking about leaving a school, thus capturing a different part of the retention process. Additionally, Mattern, Woo, et al. (2010) created a more limited measure of fit, such that students were either considered a fit or misfit on a given dimension. The current study assesses fit as a continuous variable and thus captures a wider range of attitudes and preferences. Thus, there are several reasons to expect more encouraging results in the current study.

Taylor and Whetstone (1983) confirmed that when students share values, goals, and attitudes with their university, the student is much more likely to remain at that

institution. However, they focused on the match between engineering students and an engineering program compared to students in arts and sciences or those at the Air Force Academy. Because of this, Taylor and Whetstone assessed how similar the engineering students were to each other and thus their findings might actually demonstrate that students in a particular academic program thrive when they are similar to their peers in that program, a method more akin to a subjective assessment of PG fit than objective PO or PE fit. In contrast, the current study examines how students and their preferences about the university environment compare to actual characteristics of the institution – not how similar these students are in personality to each other. Nonetheless, Taylor and Whetstone provide a reason to be optimistic about the role of fit in predicting student retention.

Fit As a Predictor of Retention

The following sections review several different dimensions of the college environment. The literature is reviewed and divided based upon the general dimensions outlined by previous researchers (e.g., Mansfield & Warwick, 2005; Pampaloni, 2010; Warwick & Mansfield, 2003), which formed the basis for the development of the fit measure used in the current research. However, the following factors are proposed and it is only hypothesized that the current study's fit measure will correspond to these dimensions in a factor analysis. However, as is discussed in the methods portion of this paper, a factor analysis will be conducted in order to better understand the factor structure and dimensions.

Academics. In the current study, academics refers to several variables, including the selectivity of admissions to the school, the opportunity to take small classes with

respected professors, the presence and quality of majors of interest to the student, and reputation as measured by the school's overall ranking in *U.S. News and World Report*. Indeed, after conducting a number of semi-structured interviews, Blackburn (2011) found that the reputation of a school was a critical factor for undergraduate students choosing a Master of Business Administration degree program.

Both students and parents rated academics as the most important criterion for choosing a college (Warwick & Mansfield, 2003). A meta-analysis examining the criteria students use when choosing a college found that the quality of the faculty, quality of majors of interest to the student, and overall academic reputation were the most important factors in the college decision (Chapman, 1993). In terms of the school's reputation, a recent study demonstrated that 77% of students considered the school's reputation a factor influencing their choice (Pampaloni, 2010), a result consistent with previous research confirming students use the reputation of the school and the degree in their college decisions (Broekemier, 2002; Krukowski, 1985; Mansfield & Warwick, 2005).

Climate. Though weather is often ignored by studies of the college selection process, Warwick and Mansfield (2003) conducted a qualitative study in which participants identified weather as an important part of their college decisions. In fact, research has shown that students seem to value weather in making their college choice, with students providing an average rating of weather as above the midpoint on the importance scale (Mansfield & Warwick, 2005; Warwick & Mansfield, 2003). The authors hypothesized that weather is a concern to students for two reasons. The first

reason being that weather is a major part of the environment students must deal with in college as they walk to classes and various buildings, to cars and parking lots and dorms. Secondly, weather influences the types of extracurricular activities available, such as skiing, boating, hiking, mountain climbing, and more. Thus items assessing the importance of weather and how it influences outdoor activities were used in the current study.

Financial. Obviously misfit between what a student can afford to pay and what it costs to attend a university can cause anxiety and thus, it is easy to see that fit between the student and his or her environment in terms of finances cannot be ignored. Financial fit refers to both tuition and cost of living amounts. Assessing the cost of living is an important part of how well a student's financial needs are met by the environment at a school. That is, financial concerns for students extend beyond the simple cost of tuition because individuals must consider the cost of living at a given school, which is influenced by the school's location and housing options (Hossler 1999, 2000; Price, Matzdorf, Smith, & Agahi, 2003).

By far, high school students rate the cost of attending a given college as the most important factor in their college selection decision (Kelpe Kern, 2000; Mansfield & Warwick, 2005; Shank & Beasley, 1998; Warwick & Mansfield, 2003). Research has shown that increases in expectations about receiving financial aid are accompanied by an increase in intentions to apply and attend a given college (Kim, DesJardins, & McCall, 2009). Similarly, when students expect to receive financial aid, but do not, they are much

less likely to attend that school, suggesting that cost is an important predictor of intentions to attend a school (Kim, DesJardins, & McCall, 2009).

Off campus. Students often consider the environment around a campus when choosing a college. Specifically, students may consider whether there is a major airport near the campus and whether there are social and cultural activities near campus. The importance of these factors is supported by research demonstrating that students value cultural diversity as well as a variety of social activities in potential schools (Mansfield & Warwick, 2005; Warwick & Mansfield, 2003). Students try to choose schools where they will be able to achieve social integration or achieve both personal and social success, which increases the probability that the student will complete his or her undergraduate degree (Clark & Crawford, 1992). Assessing the off campus environment also helps measure the importance of the location of a school, how rural or urban it may be, an important part of the college decision for many students (Warwick & Mansfield, 2003). Previous research has shown that the majority of students with a preference desire a more urban environment because they believe it is more engaged with the world around it and more in touch with the professional and business worlds (Krukowski, 1985).

On campus or campus life. The campus environment is another important aspect of the college choice. The campus includes the architecture and buildings, whether a campus feels more historic and traditional or more contemporary and modern. The architecture on campus is a critical part of the overall aesthetics of the environment of a college and it is clear that students value an attractive campus (Reynolds, 2007; Shank & Beasley, 1998). Reynolds (2007) found that half of those responding to a national survey

rated the attractiveness of a campus as "essential" or "very important" to their college choice.

Another aspect of the college environment is how clear the boundaries of campus are, whether there are ambiguous edges or a definitive border between the school and community. The boundaries of the campus may make a student feel much safer, reduce the feeling of physical risk he or she feels, which is an aspect of the college choice for many students (Broekemier & Seshadri, 1999; Shank & Beasley, 1998). Similarly, whether the student can live on campus is an important factor for many students who wish to live with peers in a college environment (Mansfield & Warwick, 2005; Pampaloni, 2010; Shank & Beasley, 1998).

Other parts of the campus may influence how positively a student perceives a school after a visit, which influences an individual's decision to attend a school. The overall size of the campus clearly matters to students and the size of campus influences whether students can live within walking distance of classes and whether they can walk to classes rather than needing to drive across a large campus (Mansfield & Warwick, 2005). Students may also wish to know about the availability of public transportation, both because it will help them get around a large campus and because it might reduce the cost of living and make a school more affordable if the student can attend without needing a car. Both the cost of living and the cost to attend a school as well as campus and school size are both critical to the college choice (Kim, DesJardins, & McCall, 2009; Shank & Beasley, 1998).

Another important part of the college environment is the quality of fitness facilities for students. One study found that students at schools with higher quality facilities viewed these facilities factors as more important in the college decision (Price, Matzdorf, Smith, & Agahi, 2003). In one study asking students to identify which aspects of the campus they want to see on a college visit, students identified various academic facilities, residence halls, and exercise and fitness facilities (Reynolds, 2007). This finding indicates that not only are academic facilities and potential living spaces important, but fitness resources are also important to students choosing a college. Two-thirds of students in a national sample claimed that the quality of a college's facilities is "essential" or "very important" to their college decisions (Reynolds, 2007).

Social. Social activities and groups on campus are an important consideration to students who are thinking about how they will potentially meet other students. Thus high school students often think about how similar they are to current students in terms of involvement in political, religious, and military groups. The presence of an ROTC or military program may be important to students for two reasons. First, the presence of the program is part of the campus atmosphere, which students consider in decision-making (Galotti & Mark, 1994). Second, ROTC and other military programs may help a student pay for college, and cost is a critical component in the student's decision (Kim, DesJardins, & McCall, 2009; Mansfield & Warwick, 2005).

The political and religious views of current students are also important considerations for those making the college choice. For example, the relative conservative or liberal leanings of students and level of political activity of students as

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well as the importance of environmental sustainability on campus address the social politics of students at a school. Other aspects of social fit include the presence of Greek life or whether there are fraternities and sororities that a student may join. The presence of Greek life is one factor that college-bound high school students want to know before making their decision about a school (Morrison, 1968) and a factor students rate as important to their choice of school (Pascarella, Pierson, Wolniak, & Terenzini, 2004).

Another part of social fit involves the presence or absence of a group for the student's religious affiliation and the school's affiliation with a particular religious group. All of these factors influence whether a student believes he or she will be able to fit in with the social environment, a major concern for college-bound students. Specifically, students rate the religious and friendliness of the atmosphere at a school as important in their college decision (Mansfield & Warwick, 2005; Warwick & Mansfield, 2003). There are seemingly conflicting findings about the importance of a school's religious affiliation because Koshal and Koshal (1999) found that some students were willing to pay more in order to attend a school with a particular religious affiliation, but Chapman (1993) found that religious activities are rated as relatively less important to choosing a college.

Additionally, students may consider the alumni network of a given school when making their college decision. A tight network of graduates from the university may also be a consideration for students who wish to see successful alumni and gain access to internships in college, both of which may be provided by the presence of a strong graduate network (Galotti & Mark, 1994; Pampaloni, 2010). Additionally, a tight

network of alumni indicates successful and strong bonds between students that last beyond the college years, something many students find desirable (Pampaloni, 2010).

Sports. Attending athletic events and being part of a college with prominent sports teams is an important part of the college experience for many students. Multiple studies have demonstrated that while it may not be the most important criteria for most students, a college's athletic programs and the reputation of its athletics do factor into the college selection (Broekemier & Seshadri, 1999; Chapman, 1993; Shank & Beasley, 1998; Warwick & Mansfield, 2003). However, males are consistently more likely to rate high quality or prominent varsity sports programs and intramural activities as important factors in their college choice (Hayes, Walker, & Trebbi, 1995; Shank & Beasley, 1998). Nonetheless, the importance of athletics is underscored by the fact that applications for admissions significantly increase in the years after a school wins a national championship in basketball or football (Toma & Cross, 1998).

Student Body. Whether a student will fit in with others on campus is affected by a number of factors and how similar the individual is to others in many ways. For example, students may wish to attend a school with mostly male or female students, with internationally and ethnically diverse students, and with more traditional students who live on campus and are attending college for the first time. Research suggests all of these characteristics of the student body are important to the student's decision making process and thus likely affect how well students adapt to college because it influences how the students may make friends and get involved in activities (Bennett & Ali-Choudhury, 2009; Mansfield & Warwick, 2005). Females are more likely to rate the diversity of

students as an important factor in the college decision, but many students claim that they consider the diversity of the student body in choosing a college (Shank & Beasley, 1998), though cultural diversity has been rated one of the least important factors high school students consider in their decision (Mansfield & Warwick, 2005).

Conclusion

The factors a student considers when choosing a college number almost as many as the schools a student may choose from. These various dimensions highlight the vast array of factors that may influence whether a student feels a sense of fit with his or her environment. Additionally, research demonstrating the important role of a student's first year of college suggests that fit in this first year may be a key to understanding retention. However, research on personality and individual differences demonstrates that fit is not the only important predictor of student success.

CHAPTER FOUR

INDIVIDUAL DIFFERENCES AND RESILIENCE CONSTRUCTS

Individual Differences

In understanding college student retention and success, it is important to consider the role of person-environment fit. Inherent in this construct is the idea that both individual characteristics, or "the person", and the environment matter. Though the person in PE refers more to the individual's preferences for the environment, the way an individual thinks about and understands fit and makes decisions about continuing education is influenced by cognitive individual differences. Thus, not only are the characteristics of a college environment critical, but the stable individual differences that affect fit as well as retention are crucial to understand and include in such research.

Early Personality Research

Previous research has investigated the importance of individual differences and personality traits in forming, defining, and influencing both subjective and objective fit perceptions and measurements. Judge and Cable (1997) pointed to the importance of personality in forming individual perceptions of fit because personality is tied to individual values, one of the most commonly assessed dimensions of fit. Theories of personality proposed by some of the most prominent psychologists in the field, both Cattell (1946/2009) and Hogan (2005), have defined personality traits such that they are stable mental structures that guide an individual's choices and behaviors. Cattell tried to sum up personality as classes or groups of traits that share some common features. These groups included dynamic traits such as dispositions and sentiments; temperament,

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including emotionality and surgency; and abilities or cognitive traits, including native general intelligence and acquired perceptual skills. According to his definitions, dynamic traits are those that show the greatest responses to incentives. Abilities respond to changes in the "complexity of the path to a goal" (Cattell, 1946/2009, p. 237). Temperament refers to traits that are least reactive to changes in the environment (Cattell, 1946/2009). Interestingly, Holland's early work on vocational preference used Catell's 16 Personality Factor Questionnaire to demonstrate that his measure was related to existing personality types (Holland, 1960).

Hogan (2005) defined personality as both generalizations about human nature and characteristics that all humans shared as well as explorations of individual differences and suggested that differences in desires for and attempts to obtain acceptance, status, and meaning are the most important domains of personality. Thus, Hogan suggests that personality guides values – in how much an individual desires acceptance, status, and meaning – as well as decisions and preferences for situations that support these values. Thus, Hogan's work also demonstrates that values are different from personality and traits. That is, personality is more than the sum of values or traits alone. Additionally, Hogan's focus on meaning making is important here as it is part of the discussion of the personality traits examined in the current study, which will be discussed later.

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Dispositional Resilience

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The idea of resilience has gained popularity as positive psychology has grown and researchers have focused on individual differences that may protect individuals from stressful experiences. Resilience may include a variety of constructs, but may have been

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described best by Luthar, Cicchetti, and Becker (2000) as "a dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). Others have defined resilience as the ability to "rebound from crisis" (Almedom, 2005, p. 253). From these definitions and the literature, it is clear that resilience refers to an individual's reaction to a stressful or traumatic experience and that it also involves some sort of positive result or adaptation to the environment (Cicchetti & Garmezy, 1993; Luthar, Cicchetti, & Becker, 2000). The first part of this definition also explains why a large segment of the resilience literature focuses on an individual's reaction to an extremely traumatic event such as cancer (e.g., Hou, Law, Yin, & Fu, 2010), exposure to military combat (e.g., Casey, 2011), or terrorist attack (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). However, many other studies have recognized the protective effects of resilience for individuals facing less extraordinary levels of stress, such as nurses (e.g., Larrabee et al., 2010) or undergraduate students (e.g., Hartley, 2011). It is this second category of resilience studies and research that inform the current research.

The definition of resilience also allows for some ambiguity – that is, a variety of constructs that describe adaptive coping to stressful events as an individual difference may all fall under the resilience label. Specifically, this research utilizes three individual difference constructs that describe positive responses to stress in order to assess the role of resilience in predicting student adaptation to college as well as student-institution fit perceptions. In the current research, hardiness, core self-evaluations (CSE), and psychological capital (PsyCap) are all used as measures of a dispositional resilience construct.

Hardiness

Hardiness first appeared in the psychological literature as a critical predictor of those who experienced physical and mental illness symptoms after prolonged levels of stress. Kobasa and Maddi studied managers at Illinois Bell Telephone during the time the company faced federal deregulation and mandatory sale of its holdings, over the course of 12 years, including a reduction of more than half the employees in only one year (Kobasa, 1979; Maddi, 2002). Maddi and his colleagues found that particular attitudes and viewpoints differentiated those managers who experienced greater illness symptoms compared to those who experienced less sickness, but equal levels of perceived stress (Kobasa, Maddi, & Courington, 1981; Kobasa, Maddi, & Kahn, 1982; Maddi, 1999a, 2002).

Maddi defined hardiness as "a combination of attitudes that provides the courage and motivation to do the hard, strategic work of turning stressful circumstances from potential disasters into growth opportunities" (2006, p. 160). These trait-like attitudes aid individuals in putting events or potential stressors into a broader context, helping the individual find meaning and a "deeper understanding" of events (Maddi, 1999a, p. 68). Furthermore, Maddi has claimed that hardiness is the operationalization of the existential courage philosophers such as Kierkegaard and Frankl have described (Maddi, 2002). Maddi (2002) explained that:

> The hardy attitudes structure how you think about your interaction with the world around you and provide motivation to do difficult things. When they occur together, the 3Cs of hardy attitudes facilitate awareness that you formulate life's

meaning for yourself by the decisions you make and that choosing the future

regularly, despite the anxiety of uncertainty, leads to the most vibrant life. (p.

175).

This description of hardiness, as well as the fact that researchers have referred to

hardiness scales as dispositional resilience (e.g., Hystad, Eid, Johnsen, Laberg, &

Bartone, 2010) shows how well it meets the definition of resilience, as both a response to

some sort of trauma or stress – in this case, difficult things – and how the hardy attitudes

may lead to positive adaptations or the most vibrant life.

One of the other important reasons for studying hardiness is that, like most

positive psychology constructs, it is considered an individual difference that may be

affected by interventions. That is, unlike many other personality traits, hardiness may be

increased through training (Maddi, Kahn, & Maddi, 1998; Maddi, 2007). For example,

high-risk undergraduate students who underwent hardiness training showed significant

increases in grade-point averages compared those who were in a control group (Maddi et

al., 2002).

The 3Cs of hardy attitudes that may be trained and increased include control,

commitment, and challenge. It is critical to note that in his writings, Maddi has

emphasized that in order for an individual to benefit from hardiness, all three of the hardy

attitudes must be present. Maddi has theorized that the presence of any one or two of the

attitudes, without the other(s), may leave an individual vulnerable to maladaptive coping

and responses to stress (Maddi, 1999a, 2002, 2006). For example, Maddi has argued that

individuals merely high on challenge are likely to become reckless adventurers while

those high only in levels of control may become Type A perfectionists obsessed with details (Maddi, 2002). However, there appears to be little to no empirical support for this idea or for operationalizing the 3Cs as a three-way interaction. Most researchers, including Maddi, operationalize the attitudes as subscales of a single hardiness measure (Eschleman, Bowling, & Alarcon, 2010).

There is some disagreement among researchers about the dimensionality of hardiness (Carver, 1989; Funk, 1992). While some prefer to examine hardiness as three separate dimensions, others believe that it is actually a unidimensional construct. The majority of factor analyses of hardiness have revealed three separate factors (Bartone, Ursano, Wright, & Ingraham, 1989; Hull, Van Treuren, & Virnelli, 1987; McNeil et al., 1986). However, some researchers argue that hardiness has only one dimension (e.g., Kobasa, Maddi, & Kahn, 1982; Manning, Williams, & Wolfe, 1988), but others argue for two dimensions (e.g., Funk & Houston, 1987) when examining hardiness subscales. Regardless of this conflict, the majority of studies assess the three separate facets of hardiness, yet score all of the items together in a single composite measure (Carver, 1989; Eschleman et al., 2010; Hystad et al., 2010).

Researchers have resolved this conflict – at least in principle – by utilizing a hierarchical measure of hardiness such that instead of merely have one or three second-order factors, there are three second-order factors and one third-order factor (Hystad et al., 2010; Sinclair & Tetrick, 2000). The current study will utilize this approach by examining both an overall hardiness composite score as well as the individual facets. By using this method, it is possible to understand and use hardiness in a way consistent with

the theoretical background, while still gaining information about the contribution of each facet. The latter idea is one recommended and supported by research findings that the facets add incremental validity above and beyond the global hardiness measure (Sinclair & Tetrick, 2000). In the current study, this approach also yields the advantage that the facets of hardiness may be compared to those of the other resilience constructs. Thus, unlike the other sections on resilience constructs, this section will review each of the facets of hardiness, followed by a review of the global hardiness construct and its relationships with other variables.

Commitment. In the context of hardiness, commitment does not refer to an individual's feelings about an organization or person, but addresses one's engagement with friends, family, community, things and events (Maddi, 2004). Commitment refers to the belief that life is "interesting and meaningful" (Bartone, Eid, Johnsen, Laberg, & Snook, 2009, p. 502). Individuals who are low on the dimension of commitment are characterized as those who prefer to exist in a state of perpetual isolation, choosing to alienate themselves from others and maintain detachment from external circumstances (Maddi, 2002). Commitment has also been explained as an individual's curiosity about and sense that life has a greater meaning (Kobasa, Maddi, & Courington, 1981). Feelings of commitment drive an individual to remain involved and active even when situations are difficult.

In their recent meta-analysis, Eschleman et al. (2010) found that commitment had a significant unique effect – that is, explained variance not accounted for by the other two dimensions of hardiness – in 28 of the 32 relationships examined. Commitment also had

the strongest unique effect in more of these analyses than either of the other two facets, with commitment as the strongest unique predictor in 24 of these analyses (Eschleman et al., 2010). Thus, Eschleman et al. (2010) have suggested that "commitment is likely the most valuable component in predicting criteria" (p. 302).

Control. In the context of hardiness, control refers to an individual's belief that he or she can exert some sense of control over the environment and one's surroundings. An individual who scores high on the dimension of control views stressors as changeable (Funk, 1992; Kobasa, Maddi, & Courington, 1981). In the early days of hardiness research, before the advent of the Hardiness Institute and copyright-protected hardiness measure, control was often measured using traditional measures of locus of control (e.g., Kobasa, 1979; Kobasa, Maddi, & Courington, 1981). Locus of control refers to the attributions individuals make about their lives and the causes of events (Rotter, 1966, 1990). Individuals with an internal locus of control believe that they can exert influence over events. Those with an external locus of control believe that fate, chance, luck, or some force outside of the individual is responsible for events (Abramson, Seligman, & Teasdale, 1978; Rotter & Mulry, 1965).

Locus of control also has a variety of significant relationships with other variables, including job attitudes and health and well-being. In the academic context, college students who have higher levels of an external locus of control also report higher levels of perceived stress (Roddenberry & Renk, 2010). A review of the literature revealed that the majority of studies conducted have found a positive correlation between

greater levels of an internal locus of control and academic achievement (Findley &

Cooper, 1983).

Meta-analytic results demonstrate positive correlations between high levels of

internal locus of control and a variety of well-being outcomes, including mental well-

being, life satisfaction, and self-reported physical health (Ng, Sorensen, & Eby, 2006).

This meta-analysis also demonstrated a positive association between internal locus of

control and a variety of job attitudes such as job satisfaction, satisfaction with a variety of

aspects of the job, and affective organizational commitment (Ng et al., 2006). Similarly,

internal locus of control is positively related to job motivation variables including task

motivation, expectancy, self-efficacy, and job involvement; as well as task and career

success (Ng et al., 2006). As suggested by the close relationships between different

facets of hardiness, meta-analytic results revealed a positive relationship between internal

locus of control and perceived job challenge, rather than job boredom or disinterest (Ng

et al., 2006).

While not necessarily as powerful as commitment, control is still an important

component of hardiness and one that adds to the prediction of important outcomes. In

their meta-analysis, Eschleman et al. (2010) found that control had a significant unique

effect in 25 of the 32 relationships examined. Control also had the strongest unique effect

of the 3Cs in seven of these relationships (Eschleman et al., 2010).

Challenge. Challenge refers to a willingness to take on difficult situations and

decisions, despite the anxiety of uncertainty involved (Maddi, 2002). Individuals who are

considered high in challenge demonstrate a desire to continually learn from both positive

and negative situations. These persons also expect that life can and will change, a belief that may foster personal growth and development (Kobasa, Maddi, & Courington, 1981).

The idea of challenge can also be explained as part of the transactional model of coping which holds that individuals engage in cognitive appraisals where they evaluate the environment and a potential stressor (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1987). These evaluations happen as both primary and secondary appraisals in which individuals evaluate what may be at stake in the situation and what may be done to avoid harm or attain benefits, respectively. Both of these appraisals "converge to determine whether the person-environment transaction is regarded as significant for well-being, and if so, whether it is primarily threatening (containing the possibility of harm or loss), or challenging (holding the possibility of mastery or benefit)" (Folkman et al., 1986, p. 993). Thus, individuals who are high in levels of challenge have a tendency to cognitively appraise a potential stressor or difficult situation as a chance to master a skill or earn some benefit.

While the vast majority of the studies show that both the use of the hardiness facets and the global measure yield similar relationships to other outcomes, there are some differences, particularly concerning challenge. Hull et al. (1987) found that challenge was, on the whole, "less predictable" (p. 527) and that short versions of the challenge scale were significantly and positively related to the tendency to engage in escapist fantasies and have empathic concern. The other facets of hardiness have no such significant relationships with those scales of the Interpersonal Reactivity Index. Similarly, Hull et al. (1987) found that the short form of the challenge scale was

positively related to Type A personality characteristics, while none of the other facets showed significant relationships with Type A.

Other researchers have suggested that challenge should even be dropped from the hardiness model because it does not predict additional variance in health outcomes, above and beyond the other two dimensions (Florian, Mikulincer, & Taubman, 1995; Funk & Houston, 1987; Hull et al., 1987). Hull et al. (1987) noted that of the five studies that had reported the independent effects of commitment, control, and challenge on health, commitment predicted health in all of them (Kobasa, 1982; Kobasa, 1980; Ganellen & Blaney, 1984; Rich & Rich, 1985; Schlosser & Sheeley, 1985, all as cited in Hull et al., 1987), control in four of them (all except Ganellen & Blaney, 1984), and challenge only one of them (Ganellen & Blaney, 1984). Additionally, in their meta-analysis of hardiness studies, Eschleman et al. (2010) found that challenge had a significant unique effect in 20 of the 32 relationships analyzed. However, challenge had the strongest unique effect in only one of the analyses (Eschleman et al., 2010). These meta-analytic findings have supported Eschleman et al.'s arguments that all three components of hardiness are important to an understanding of the overall construct because each facet explains unique variance. Thus, Eschleman et al. (2010) have argued that challenge should not be excluded from hardiness, but the different facets may have different levels of importance depending upon the criteria studied.

Hardiness in the Nomological Net

The main value of hardiness is suggested by its place in the original Illinois Bell Telephone studies, as a buffer in the stress—illness relationship, such that managers who

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displayed the 3Cs of hardiness suffered fewer physical illness symptoms and issues as a result of the massive organizational upheaval (Khoshaba & Maddi, 1999; Kobasa, 1979). In these early studies, hardiness was conceptualized as a mediator of the stress-illness relationship (Kobasa, Maddi, & Courington, 1981). Since then, research has confirmed the protective impact of hardiness (e.g., Lambert, Lambert, & Yamase, 2003), particularly for soldiers facing the stress of combat and peacekeeping deployment (e.g., Bartone, 1999; Britt, Adler, & Bartone, 2001).

Of particular relevance to the current study, hardiness has been shown to moderate the relationship between academic stress and health, such that those higher in hardiness report fewer health complaints as a result of academic stressors (Hystad, Eid, Laberg, Johnsen, & Bartone, 2009). Similarly, Sheard (2009) found that the commitment dimension of hardiness significantly predicted GPA at graduation and other academic performance criteria. In fact, Sheard concluded that commitment was the best predictor of academic achievement.

Additionally, Bartone and his colleagues found that hardiness predicted leader performance in West Point cadets (Bartone, Eid, Johnsen, Laberg, & Snook, 2009). Another study led by Bartone demonstrated that hardiness predicted those soldiers that were able to graduate from Special Forces training (Bartone, Roland, Picano, & Williams, 2008). These findings are of particular interest given the current study's inclusion of students at a military academy.

Meta-analytic results have shown that hardiness is associated with a variety of variables including individual differences, coping, stressors, strains, and more. In terms

of personality traits, the most notable results showed a positive relationship with sense of coherence and optimism (Eschleman et al., 2010). Meta-analytic results have also shown that hardiness is negatively associated with a variety of stressors including life, work, and interpersonal stressors; role ambiguity, overload, and conflict (Eschleman et al., 2010). Hardiness was also negatively related to a variety of strains including psychological distress, depression, burnout, posttraumatic stress disorder, poor mental health, psychological maladjustment, and frustration (Eschleman et al., 2010). Conversely, hardiness was positively related to a variety of psychological health and well-being measures such as job and life satisfaction, personal growth, engagement, happiness, and quality of life (Eschleman et al., 2010). Similarly, hardiness was positively associated with both job and school performance (Eschleman et al., 2010). These results are fairly consistent with other reviews and meta-analyses (i.e., Funk, 1992; Lambert & Lambert, 1999; Maddi, 1999b, 2002; Oliver, 2005, 2009).

Core Self-Evaluations (CSE)

Core self-evaluations are considered a dispositional meta-construct composed of four facets or dimensions including emotional stability, generalized self-efficacy, locus of control, and self-esteem. CSEs incorporate the way individuals think about themselves, the world, and other people (Judge, Locke, & Durham, 1997). Judge, Bono, Erez, and Locke (2005) argued that individuals with a positive CSE are able to cope with external limits and challenges as well as experience positive emotions and attitudes because these CSE traits aid in self-regulation. Judge (2009) has clarified that core self-evaluations are bottom-line evaluations that people make about themselves, including their self-worth.

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But CSE should be considered more inclusive than self-esteem because it also involves an individual's beliefs about his or her capabilities and ability to control his or her life as well as his or her competence and capacity to cope, persevere, succeed, and perform along with a general belief that life will turn out well (Judge, 2009).

It is here, in this broader definition and clarification about CSE that it is possible to see how core self-evaluations are a type of resilience trait. According to work reviewed earlier, resilience may be considered an individual difference in the ability to bounce back and rebound from crisis (Almedom, 2005; Luthar, Cicchetti, & Becker, 2000). CSE is obviously an individual difference variable and clearly involves one's beliefs about being able to survive and persevere through tough times and challenges. Additionally, CSE includes locus of control, one of the three facets of hardiness, another important resilience construct. CSE also has positive associations with other variables, such as job satisfaction and performance (Judge & Bono, 2001), that are similar to hardiness and other resilience constructs. CSE also shares the distinct cognitive and affective dimensions included in other resilience constructs that focus on how an individual thinks about events, evaluates and compares those events to resources available, and how to cope with such difficulties. Thus, while CSE may not be the first construct brought to mind when considering dispositional resilience, it clearly qualifies as resilience according to original conceptualizations of the latter variable (Almedom, 2005; Luthar, Cicchetti, & Becker, 2000).

Core self-evaluations were originally considered a dispositional predictor of job satisfaction (Judge, Locke, & Durham, 1997), but have evolved into something more as

the construct has been developed and researched. Judge and colleagues have argued for CSE's consideration in broader studies of work motivation and job performance, an idea supported by empirical evidence suggesting its usefulness in predicting job-related motivation (Chang, Ferris, Johnson, Rosen, & Tan, 2012; Judge, Erez, & Bono, 1998; Judge & Bono, 2001). Additionally, CSE seems particularly likely to be considered with other motivational constructs because two of its facets, locus of control and self-efficacy have their roots in motivation research (Chang et al., 2012; Johnson, Rosen, & Levy, 2008).

Judge et al. (1997) selected emotional stability, generalized self-efficacy, locus of control, and self-esteem as the critical components in this meta-construct because all four met three criteria: evaluative-focus, fundamentality, and breadth or scope. First, Judge et al. focused on identifying traits that were evaluation-focused – that is, these traits focused on evaluating or judging rather than describing. Second, these four facets all had a high degree of fundamentality. Fundamentality is based on Cattell's early research (1965, as cited in Judge & Bono, 2001) and theories that argued fundamental traits underlie or are the source of the surface traits. According to Cattell, source traits are the underlying, broader foundational parts of personality, while surface traits are the observable traits that may easily be measured and that exist in clusters and groups of source traits (1945, 1946). Judge et al. (1997) argued that these four facets – emotional stability, generalized self-efficacy, locus of control, and self-esteem – underlie surface traits. Third, Judge et al. (1997) argued that these facets all have a high degree of breadth or scope. That is, these

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facets are broader in scope and include more actions, traits, and information, than other, more secondary traits, as outlined by Allport (1961, as cited in Judge & Bono, 2001).

Interestingly, core self-evaluations were proposed as a dispositional approach to job satisfaction. The authors praised the dispositional approach because they claimed that it can be integrated with the other dominant approaches to job satisfaction – those involving the importance of situations and person-environment interactions (Judge, Locke, & Durham, 1997). Thus, the current research takes a similar stand in using these dispositional traits to understand PE fit.

Core self-evaluations have a number of important relationships with other well-being and job attitudes variables. As mentioned previously, meta-analytic results show that CSE has positive relationships with both job performance and job satisfaction (Chang et al., 2012; Judge & Bono, 2001). Judge and Hurst (2008) demonstrated that high core self-evaluations predict initial levels of work success and steeper success trajectories even when CSE is measured during adolescence or young adulthood. Additionally, Judge and Hurst found that education and health problems that interfere with work mediate these relationships, which led the authors to conclude that individuals with high core self-evaluations have better careers, in part, because these people are more likely to stay healthy and pursue further education.

In a summary of the first ten years of CSE research, Judge (2009) concluded that individuals with high CSE show better job performance and tend to cope with setbacks better and take advantage of opportunities more so than those with lower core self-evaluations. Individuals with high levels of CSE report lower levels of stress and conflict

(Judge, 2009). These individuals are also higher in levels of job and life satisfaction as well as career success (Chang et al., 2012; Judge, 2009; Judge, Bono, Erez, & Locke, 2005).

Judge et al. (2005) found that high core self-evaluations were positively related to goal self-concordance. This means that individuals with higher CSE were more likely to choose and pursue goals for intrinsic reasons and because such goals are congruent with their values (Judge et al., 2005). Thus, it has been suggested and some research supports the idea that CSE is associated with positive outcomes because it facilitates adaptive actions such as the pursuit of higher education and helps individuals work with any early advantages they may have as well as influencing goal choice and pursuit.

Emotional stability. Emotional stability has long been recognized as an important part of research in individual differences and it is an important part of the Big Five model of personality, though it is often referred to as neuroticism or emotional instability in the context of that model. Judge and Bono have argued that emotional stability reflects the tendency to be confident, secure, and steady (Judge, 2009; Judge & Bono, 2001). Conversely, low emotional stability or neuroticism has been considered indicative of chronic emotional activation, frequent and/or prolonged reactivity, and general arousal (Dienstbier, 1989; Eysenck, 1990; Norris, Larsen, & Cacioppo, 2007). Individuals low in emotional stability tend to experience mood swings, negative affectivity, and depression (Dienstbier, 1989). Thus, individuals with positive or adaptive core self-evaluations have high levels of emotional stability. Neuroticism has been praised by researchers who demand a more biological and genetic or physiologically-

based theory of personality because of findings demonstrating a genetic basis for neuroticism (see Eysenck, 1990 for a review).

Neuroticism predicts a number of negative and unpleasant outcomes, including physical health problems such as chronic fatigue syndrome, ulcers, and coronary heart disease (Booth-Kewley & Friedman, 1987; Friedman & Booth-Kewley, 1987), even when physical symptoms are assessed 25 years after the measure of neuroticism (Charles, Gatz, Kato, & Pedersen, 2008) or assessed by meta-analysis, as in Friedman and Booth-Kewley's research (1987). Conversely, meta-analysis has demonstrated that low neuroticism is predictive of both job performance and job satisfaction (Judge & Bono, 2001).

Generalized self-efficacy. Generalized self-efficacy refers to an individual's beliefs about his or her ability or capacity to do what is necessary to accomplish a particular outcome (Bandura, Adams, & Beyer, 1977). Individuals with high self-efficacy believe that they possess the ability to complete tasks and overcome difficulties (Bandura, 2001). An individual's beliefs about his or her efficacy can influence the activities that individual chooses to engage in as well as coping efforts during the process of an action. Self-efficacy first influences the actions and challenges an individual chooses to engage in because individuals make judgments about their own capabilities and subsequently avoid those that are judged beyond one's abilities. Second, self-efficacy affects how an individual copes with difficulties encountered after the start of an activity. If an individual's self-efficacy in a given task is fairly low, the individual will expend less effort and energy in persisting after encountering difficulty and give up believing that

expending further effort is a waste (Bandura et al., 1977). Conversely, if an individual's self-efficacy is high, he or she will persist longer because of the belief that the task can be completed (e.g., Bandura et al., 1977; Bandura, 2007; Bandura & Cervone, 1983).

Generalized self-efficacy is different from self-esteem because the former is more about motivation and involves more judgments about whether one is capable of completing a task. In turn, these beliefs influence the choice of and pursuit of a goal (Chen, Gully, & Eden, 2004). Research has demonstrated that self-efficacy has strong, positive correlations with conscientiousness, openness to experience, learning goal orientation, work self-efficacy, and behavioral intentions (Chen et al., 2004).

It is important to note that self-efficacy is a particularly relevant topic in academia and, in particular, predicting student success. That is, students with high self-efficacy have been found to manage their work time more effectively, solve problems more efficiently, and persist longer than peers with equal ability, but less efficacy (Schunk & Pajares, 2005; Usher & Pajares, 2008). In a longitudinal study, the self-efficacy of middle school students predicted their high school graduation and high school academic achievement (Caprara et al., 2008). College students with lower levels of self-efficacy also reported greater levels of stress (Roddenberry & Renk, 2010). A meta-analysis of self-efficacy in educational settings demonstrated that it predicted both academic performance ($r = .38$) and persistence ($r = .34$; Multon, Brown, & Lent, 1991).

In the industrial and organizational literature, a meta-analysis demonstrated that generalized self-efficacy is also positively related to both job satisfaction and job performance (Judge & Bono, 2001). Self-efficacy may also buffer an individual from the

effects of stressors (Stetz, Stetz, & Bliese, 2006). Self-efficacy may even reduce the negative cardiovascular effects of high levels of job demands (Schaubroeck & Merritt, 1997). Researchers have also demonstrated a positive relationship between self-efficacy and optimism, a facet of psychological capital, a resilience construct discussed later (Klassen, 2004; Usher & Pajares, 2008).

Locus of control. In terms of CSE, locus of control refers to an internal locus of control – that is, individuals with positive core self-evaluations have an internal locus of control and believe that they can exert influence over events in their lives. As reviewed previously in the section outlining hardiness, meta-analytic results have shown that an internal locus of control is positively associated with a variety of favorable outcomes including job satisfaction, affective organizational commitment, life satisfaction, mental well-being, physical health, job challenge, and self-efficacy (Ng, Sorensen, & Eby, 2006). One interesting result demonstrating a connection between the facets of CSE is the meta-analytic finding that an internal locus of control is positively related to self-efficacy (Ng et al., 2006). Because this construct was reviewed earlier, it will not be discussed further here.

Self-esteem. Self-esteem refers to the difference between how an individual perceives him or herself and the person the individual wishes to become (Block & Robins, 1993). Judge and Bono (2001) theorize that individuals with high self-esteem choose to engage in behaviors and have cognitions that reinforce their positive self-concept. This adaptive cycle promotes both job satisfaction and performance and thus CSE is positively related to both constructs (Judge & Bono, 2001). High self-esteem has

also been shown to protect individuals against anxiety (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Some researchers have hypothesized that this happens because high self-esteem individuals are either engaged in behaviors disproving poor performance or focusing on the positive aspects of themselves and thus there is no anxiety resulting from a fear of or focus on failure (Pierce & Gardner, 2004; Pyszczynski et al., 2004).

Baumeister and his colleagues have categorized the benefits of high self-esteem into two categories: enhanced initiative and pleasant feelings (Baumeister, Campbell, Krueger, & Vohs, 2003). For example, those with self-esteem are more likely to speak up in group meetings and criticize the group's approach (Baumeister et al., 2003). In terms of pleasant feelings, self-esteem has a strong, positive relationship with happiness and Baumeister et al. (2003) have even concluded that they have found themselves "persuaded that high self-esteem does lead to greater happiness" (p. 1). Indeed, meta-analytic results demonstrated a positive association between self-esteem and both job performance and satisfaction (Judge & Bono, 2001). In fact, of the four facets of CSE, self-esteem is the strongest predictor of job performance (Judge & Bono, 2001).

Positive Psychological Capital (PsyCap)

Positive psychological capital or PsyCap is the third resilience-type construct examined in the current research. PsyCap comes from the idea of economic capital and the supposition that financial assets and resources are not the only capital an organization needs to succeed. Luthans and his colleagues proposed that in addition to traditional economic capital, or "what you have," you also need human capital, involving employee

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experience, education, knowledge, skills, and ideas, or "what you know" (Luthans, Luthans, & Luthans, 2004). Additionally, an organization needs interpersonal and social resources or social capital including relationships with others and a network of contacts – in other words, "who you know" is important. And lastly, PsyCap researchers argue that positive psychological capital or "who you are" is the last important part of the successful organization (Luthans et al., 2004).

PsyCap as a composite variable has been shown to be a better predictor of performance and satisfaction than any of its facets alone (Luthans Avolio, Avey, & Norman, 2007). PsyCap significantly predicts both job satisfaction and organizational commitment (Larson & Luthans, 2006). Like the other types of capital and resilience constructs reviewed here, positive psychological capital includes several facets or dimensions, including confidence or self-efficacy, hope, optimism, and resilience.

Confidence or self-efficacy. Confidence or self-efficacy in the context of PsyCap refers to the same generalized self-efficacy construct included in CSE. Luthans et al. (2004) have argued for its inclusion in PsyCap because of research demonstrating that it has a strong positive relationship with job performance and because it may be developed through training. Because self-efficacy was discussed previously as it pertained to core self-evaluations, it will not be discussed in any more detail here.

Optimism. Optimism involves an individual's attributional style, or how people explain the causes of events (Larson & Luthans, 2006). Optimists believe that unpleasant, undesirable events are caused by external, unstable, and specific causes (Larson & Luthans, 2006; Peterson, 2000; Seligman & Csikszentmihalyi, 2000). This means that

when something bad happens, an optimist believes that it is not his or her fault, the unpleasant event will not continue to happen, and the undesirable force will not cause other events to occur. Conversely, those low on optimism, or pessimists, have an attributional style marked by internality, stability, and generalization (Peterson, 2000; Peterson & De Avila, 1995; Seligman, 2008). That is, pessimists believe that undesirable events are their own fault, will continue to happen, and will affect other events and aspects of life.

There are two basic theories or ideas about optimism that have received considerable attention in the literature (Snyder, 1995). The first definition comes from work by Seligman and his colleagues on learned helplessness and focuses on the role of attributional or explanatory style (Abramson, Seligman, & Teasdale, 1978). The basis of this idea is that optimistic individuals explain away bad events while pessimists blame themselves for such outcomes (Seligman & Csikszentmihalyi, 2000). This theory is supported by findings demonstrating a connection between pessimistic explanatory style and negative outcomes. For example, presidential candidates who gave speeches higher in pessimistic rumination more often lost their election than did more optimistic candidates, even after controlling for incumbency and standing in the polls (Zullow & Seligman, 1990). In another study, when swimmers are given falsely negative feedback about their times, those with a pessimistic explanatory style perform worse in their next swim than do those with a more optimistic style (Seligman, Nolen-Hoeksema, Thornton, & Thornton, 1990).

The second theory of optimism comes from Scheier and Carver and their work on behavioral self-regulation and expectancy-value theories (Carver & Scheier, 1991; Scheier, Carver, & Bridges, 1994). Scheier and Carver have defined optimism as a generalized expectancy that positive outcomes are ahead (Carver & Scheier, 1991; Scheier & Carver, 1993; Scheier et al., 1994). According to this line of thinking, optimistic people generally expect better outcomes, which affects methods of coping. In turn, much of this research has focused on how optimists cope with serious illnesses and diseases far better than their pessimistic counterparts (e.g., Carver et al., 1993; Ironson et al., 2005; Shiloh, Drori, Orr-Urtreger, & Friedman, 2009).

Hope. Hope in the context of psychological capital has been defined as "a cognitive set that is based on a reciprocally derived sense of successful (a) agency (goal-directed determination) and (b) pathways (planning of ways to meet goals)" (Snyder et al., 1991, p. 571). Hope is considered both a cognitive and motivational construct that reflects an individual's beliefs about their own abilities to conceptualize goals, develop strategies for achieving those goals or engage in pathways thinking, and capacity to create and maintain the motivation to enact those plans, or agency thinking (Snyder, Lopez, Shorey, Rand, & Feldman, 2003). This definition and two types of thinking are critical to differentiating hope from optimism, another important component of PsyCap.

While optimists believe that an outcome is achievable or possible, engaging in agency thinking, they do not necessarily utilize pathways thinking. That is, an optimist may believe that a goal can be reached, but he or she does not have plans for how to get there (Snyder, 1995). Thus, it is pathway thinking that differentiates hope from optimism.

This idea is supported by factor analyses revealing that hope measures two factors, both agency and pathways (Snyder et al., 1991; Snyder et al., 1996).

Individuals high in hope are able to develop a clear goal and primary path to that goal, which they subsequently have the energy and confidence to proactively pursue. Hopeful individuals are also able to resort to a secondary plan if the original does not yield the desired results (Snyder, 2002). Indeed, the research demonstrates that individual high in hope achieve a number of positive outcomes. For example, hope significantly predicts semester grade point averages beyond previous cumulative grade point averages and self-worth for college athletes (Curry, Snyder, Cook, Ruby, & Rehm, 1997). Trait levels of hope also predict athletic outcomes beyond a variety of other variables including self-esteem, confidence, mood, and affectivity (Curry et al., 1997). Hope also predicts greater levels of well-being after the death of a loved one (Michael & Snyder, 2005).

Resilience. Resilience in the context of PsyCap is defined in much the same way as the general idea of resilience discussed previously. Avey, Patera, and West (2006) have clarified that resilience as a part of PsyCap refers to the ability to "rebound or 'bounce back' quickly from a setback or failure" (p. 45). Avey et al. (2006) explained that resilient individuals have "(a) a firm acceptance of reality, (b) a deep belief, often buttressed by strongly held values, that life is meaningful, and (c) an astounding ability to improvise and adapt to significant change" (p. 45). Resilience as a facet of positive psychological capital also tends to focus on the workplace because PsyCap is more work-specific than other resilience constructs including hardiness. Because of the close relationships between the facets of PsyCap (Luthans, Avolio, Avey, & Norman, 2007),

and one of these facets is resilience, there is evidence to support the idea that the entire meta-construct is related to resilience and may be conceptualized as dispositional resilience.

Hardiness, CSE, and PsyCap as Dispositional Resilience

Though hardiness, core self-evaluations, and positive psychological capital are not conventionally considered three versions of resilience, there is evidence to suggest that all three may measure an underlying resilience. First, hardiness has been called dispositional resilience and psychological capital contains resilience as a facet demonstrating that researchers have connected these two to resilience. Second, all three of these meta-constructs meet the basic definition of resilience – a dispositional tendency to respond to stressful events in a positive and adaptive way. Third, there are obvious connections between all of the theories as they share certain facets. Both hardiness and CSE include locus of control, while both CSE and PsyCap include self-efficacy. Thus, each meta-construct contributes something different from the others, though there are areas of overlap, suggesting a relationship between them all. Fourth, these three constructs are similar to each other in terms of their shared focus on individual differences in cognitive appraisal and understanding of potential stressors. Fifth, these three constructs are similar to each other in that they all have similar relationships to a variety of important outcomes including job satisfaction and well-being.

For example, hardiness has been shown to mediate the relationship between stress and illness (Kobasa et al., 1981; Lambert et al., 2003). Similarly, Judge and Hurst (2008) found that individuals with high core self-evaluations are more likely to stay healthy and

pursue further education and have a better career path. Research on the optimistic fact of psychological capital has shown that optimists – or those with high levels of one dimension of positive psychological capital – cope with serious illnesses and diseases better than pessimists (e.g., Carver et al., 1993; Ironson et al., 2005; Shiloh, Drori, Orr-Urtreger, & Friedman, 2009). Thus, hardiness, PsyCap, and CSE are positively related to better coping, health, and well-being.

Explicit empirical support for the relationships between these variables does exist, though limited. Lee, Sudom, and McCreary (2011) analyzed the Big Five personality traits, trait affect, trait optimism, hardiness, mastery, self-esteem, and social support in an attempt to create a higher-order model of resilience. The authors concluded that there was a "higher-order interpersonal resilience latent factor" (p. 222), but attempted to reduce the components of the model to increase parsimony and decrease redundancy. Ultimately, these authors chose to focus on the variables in their model that did not overlap with hardiness, CSE, and PsyCap, but this is an important note about the connections between these variables and dispositional resilience. Additionally, a recent factor analysis of these three meta-constructs revealed at least some support for the idea that all three load on a higher order dispositional resilience factor (Waitsman, Sinclair, Gillispie, Moore, Sears, & Mohr, 2011).

Lastly, hardiness, CSE, and PsyCap all involve a focus on how an individual makes meaning from his or her life and obstacles. Individuals high in levels of the commitment dimension of hardiness must have a "curiosity about and sense of the meaningfulness of life" (Kobasa, Maddi, & Courington, 1981, p. 369). Core self-

evaluations have a less explicit link to meaning making, but nonetheless involve how an individual thinks about challenges and responds to them. For an individual to have positive psychological capital, including the resilient facet, that person must believe that life is meaningful. The original ideas about CSE demonstrate that it is supposed to reflect the most fundamental evaluations an individual makes about his or her environment. These types of thoughts and assessments are extremely similar to those described by positive psychological capital and hardiness, thus there is a focus on making meaning. Indeed, the early personality theorists argued that the way individuals make meaning is critical to understanding individual differences (Cattell, 1946/2009; Hogan, 2005).

Conclusion

The current research responds to several calls for future research and development in the literature. First, Moos (1987) has called for research on PE fit outside of the workplace, including the classroom and school environment. Though this call to research is a bit dated, there is still surprisingly little empirical research applying PE fit to college students and the collegiate environment.

Second, the current study examines personality as a moderator of the PE-outcome relationship. Several researchers have called for greater exploration of personality's role as a moderator of the PE-outcome relationship that several researchers have deemed necessary (e.g., Tinsley, 2000; Tracey, Darcy, & Kovalski, 2000). In fact, one of the most popular criticisms of Holland's model and fit in general is from Tinsley (2000), who claimed that it was necessary to understand differences in the fit-outcome relationship for different types of individuals, with varying levels of personality traits. Tinsley argued that

this was needed in order to avoid blind adherence to what he calls the "congruence myth," or belief that fit should be applied everywhere and without regard for changes in the person or environment. The current research examines a critical idea from the occupational health literature, that of resilience, and examines it as a moderator of the fit-outcome relationship.

One of the most unique aspects of the current study is that it moves beyond the simple perception of fit self-report measures. While much of the existing literature relies on self-reported subjective fit perceptions, the present research moves towards the creation of an objective measurement of the environment. This measure is then compared to be an individual's preferences and personality, a task very rarely undertaken yet believed to be an important part of the research process, particularly in replicating research conducted with subjective fit (Caplan & Harrison, 1993).

CHAPTER FIVE

HYPOTHESIS DEVELOPMENT

Understanding Dispositional Resilience and College Environments

The variety of factors high school students consider when choosing a college suggest a number of variables that make up the college environment for students. Based upon the evidence presented here, as well as the fact that the current fit measure was devised to understand several dimensions of the environment, it is proposed that the fit measure will reveal multiple, distinct factors of the college environment. Thus, a first hypothesis is proposed:

Hypothesis 1: A confirmatory factor analysis of the objective fit items will demonstrate several distinct factors or clusters of items that correspond to the general dimensions of college choice and fit outlined here. Specifically, there will be eight factors corresponding to academics, climate, financial, off campus, on campus, social, sports, and student body dimensions of the collegiate environment.

Because of the similarities between hardiness, core self-evaluations, and positive psychological capital and how each may be considered dispositional resilience, it is hypothesized that measures of the facets of all three meta-constructs will show support for a single higher-order factor of dispositional resilience. Though the preceding literature review suggests that each facet contributes unique explanatory power and theoretical explanations of each of the composite variables, it is suggested that because of their similarities, a one higher-order factor model may be supported by empirical results.

Support for a one-factor model would be a relatively novel contribution to the literature –

building on a single conference presentation (Waitsman et al., 2011). More importantly,

however, if the three constructs could be better understood, key items may be identified

and allow for the selection of fewer items to predict outcomes of interest. Thus, the utility

of a one-factor model is quite high and the literature suggests it may be possible. Thus, a

second hypothesis is set forth:

> *Hypothesis 2:* A confirmatory factor analysis of all facets of hardiness, core self-
>
> evaluations, and positive psychological capital will demonstrate support for one
>
> higher order resilience factor.

Understanding Retention through Proximal Outcomes

The first chapter of this dissertation explored the high costs for a number of

stakeholders when students do not simply enroll in a college and graduate from that

institution four years later. However, the research indicates that the road from college

choice to graduation is anything but simple. The preceding literature review outlines

variables of focus in the current study all of which were examined here because of their

hypothesized connections to and ability to predict which students will choose a college

and obtain a degree four years after first enrolling there. Specifically, it is useful and cost-

efficient to identify those students who will transfer or leave a college because

interventions may then be targeted towards this "at risk" population and thus costly

dropouts and transfers may be avoided. Thus, the current study focuses on precursors to

the dropout or transfer decision or several proximal outcomes.

The proximal outcomes in the current study have several other advantages. Assessing these proximal outcomes has the practical advantage of being administered or measured at the same time as the other measures. In addition, these measures do not place any burden of reporting on the university and do not require the collection of sensitive or personal information, allowing students to remain completely anonymous. Furthermore, because all of these data are collected simultaneously, it is expected that the relationships between the predictors and outcomes will be stronger than if there was a greater gap between measures, as has been shown through meta-analyses involving fit and outcome relationships (Kristof-Brown, Zimmerman, & Johnson, 2005). Lastly, proximal measures are used in the current study because previous literature has considered the more distal outcomes, including grade point average and actual dropouts (e.g., Mattern, Woo, et al., 2010), but those studies have yielded limited useful information.

Adaptation to College

One particular measure aimed at identifying these at risk students is the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984). After the authors failed to create an intervention that would improve retention by facilitating a smooth transition from high school to college, Baker and Siryk realized that there was a need to better understand which students are likely to have difficulties making the transition to college (Baker & Siryk, 1980, as cited in Taylor & Pastor, 2007). Thus, Baker and Siryk created the original SACQ as a measure to help them identify students who might benefit from an intervention and thus allowing for a cost-effective targeted intervention rather than simply administering their program to volunteers who were unlikely to need help.

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Thus, the SACQ is considered an important measure for both researchers and practitioners.

Retention researchers have often pointed to the multiple dimensions of college life that may impact student retention, satisfaction, and a variety of other important outcomes. That is, unlike the transition to a new job, adjusting to college affects one's social life and academic life, both daytime and nighttime activities. Thus, it is important to measure how well a student adjusts to the institution, the new social life and academic parts of college, and the emotions associated with this transition. One reason the SACQ is used in the current research is because of its subscales, which assess institutional, academic, emotional, and social adjustment.

The SACQ is also used in the current study because of its previous use as an outcome measure in a variety of other retention-based studies. For example, the SACQ subscales have been used as outcome measures in studies evaluating the effectiveness of interventions and counseling (e.g., Dahmus, Bernardin, & Bernardin, 1992; DeStefano, Mellott, & Petersen, 2001). The SACQ and its facets have also been used to successfully predict and differentiate between students who stay at a given institution compared to those who leave it (e.g., Gerdes & Mallinckrodt, 1994; Krotseng, 1992), as well as predicting those who persist to graduation (Wintre & Bowers, 2007).

Affective Commitment

Similar to adjustment to college, affective commitment is assessed as a sort of proximal outcome in the current study. Thus organizational, school, institution, and affective commitment are used somewhat interchangeably to refer to the general affective

commitment an individual feels to his or her college, rather than the workplace as is used in the industrial and organizational psychology research. Because the current study utilizes the traditional affective organizational commitment altered to reflect the student's college or university rather than workplace, the term affective commitment is used most frequently here, but all terms are applicable.

Organizational commitment is a widely used construct in the industrial and organizational psychology literature and it is applied to the college environment in the current research for several reasons. There has been research in which predictors such as self-efficacy (e.g., Chemers, Hu, & Garcia, 2001) predict student commitment to the school (e.g., Eitle & Eitle, 2007; McNally & Irving, 2009). In fact, Tinto (1993; as cited in Chemers et al., 2001, p. 55) argued that commitment is the "key determinant of persistence and success at college." In reflecting on student retention research, Tinto (1988) posited that individuals who are more committed to their college are better able to handle the stress of the transition and thus they will not withdraw. Research supports these claims as school commitment has emerged as a direct predictor of student persistence to graduation (Wintre & Bowers, 2007).

Additionally, there is research supporting the use of commitment as an outcome in JD-R models (e.g., Bakker, Boyd et al., 2010; Bakker, Van Veldhoven et al., 2010). For example, multiple studies have shown that job resources are a significant predictor of organizational commitment (Bakker, Boyd et al., 2010; Bakker, Van Veldhoven et al., 2010; Boyd et al., 2011; Hakanen et al., 2008). Thus, commitment is an appropriate

proximal outcome in this study conducted in a college setting and as a variable predicted

by resources in the context of the JD-R model.

Intentions to Leave and/or Transfer and Search Behaviors

The current study assesses student intentions to leave the university without

graduating, including whether the student is thinking about or planning to transfer to

another university. Because no community colleges or two-year institutions were

included in the study, any transfers to another university indicated a deviation from the

ideal path of enrollment to bachelor's degree in four years.

Intentions to leave a school or transfer are perhaps the most valuable outcomes for

practitioners for several reasons. While intentions to turnover do not perfectly predict

voluntary turnover (e.g., Allen, Weeks, & Moffitt, 2005), intentions are a fitting outcome

in the current study because of their value as a proximal outcome. Intentions to leave are

still significant predictors of actual turnover behavior for employees (Allen et al., 2005)

and have been shown to be the best predictor of students who do drop out (Bean, 1982),

the very costly behavior that administrators hope to avoid. And like the other proximal

outcomes, it is useful to identify individuals high in intentions to leave or transfer

because these persons may be targeted for interventions that prevent costly turnover.

Additionally, there is a match between the cognitive predictors and outcomes here – that

is, both intentions and dispositional resilience are highly cognitive constructs.

Intentions to leave are also a valuable outcome in the current research because of

their connections to JD-R models. Several studies have demonstrated that the demands in

the job demands-resources model are predictive of turnover (Hu et al., 2011). Knudsen,

Ducharme, and Roman (2009) even demonstrated that emotional exhaustion partially mediated the relationship between job demands and turnover as well as job resources and turnover. Similarly, Korunka et al. (2009) demonstrated that job resources predict turnover intentions through work engagement. Thus, intent to turnover is an important variable to practitioners and to research using the theoretical framework of the job demands-resources model.

Using the JD-R model, wherein dispositional resilience is a resource positively related to desirable outcomes and keeping in mind the three outcome measures used in this study, the third hypothesis is created:

Hypothesis 3: Students with higher scores on a general resilience factor will show better adaptation and adjustment to college, fewer intentions to leave the school or transfer, and greater levels of affective commitment.

Similarly, using the JD-R framework, a lack of fit between an individual's preferences and the environment is considered a job demand. Because job demands are negatively related to desirable outcomes, the fourth hypothesis is created:

Hypothesis 4: Students with higher scores on each dimension of fit will show better adaptation and adjustment to college, fewer intentions to leave the school or transfer, and greater levels of affective commitment.

Specifically, the particular types of adjustment relate to different challenges and facets of the environment. Thus, it is hypothesized that particular types of adjustment will have significant relationships with corresponding dimensions of fit. For example, students who have fewer social demands, that is, better social fit, should be able to find

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groups and other students to interact and connect with and thus these students should show much higher levels of social adjustment. Thus, the following hypotheses are proposed:

Hypothesis 4a: Students with higher scores on social fit, a dimension of fit, will show greater social adjustment to college.

Similarly, institutional adjustment refers to a student's attachment to the college and their educational goals. Because this dimension of adjustment refers to a student's relationship with the institution itself – rather than the academics or student body – it is hypothesized that institutional adjustment will have the strongest relationships with on campus environment.

Hypothesis 4b: Students with higher scores in on campus environment fit will score higher on a measure of institutional adjustment.

Hypothesis 4c: Students with higher scores on academic fit will show better academic adjustment to college.

Because of the studies demonstrating that fit predicts organizational attraction, newcomer attachment, and intent to stay at a given job, it is hypothesized that fit will be particularly important to collegiate newcomers or those in their first or second years at a given college. Specifically, using Schneider's (1987) attraction-selection-attrition model, it is hypothesized that those who do not conform or fit in with the environment will leave it. Thus:

Hypothesis 5a: Fit will have a greater impact on students just starting their college career. Thus, there will be more students just starting their college careers with

poor overall fit scores. There will be a significant interaction between year in

school and fit such that fit will be a better predictor of all outcomes for students in

their first or second year of college compared to those in their third or fourth

years.

Similarly, individuals who did not fit with the environment will have left the school

before a third or fourth year at the college. Thus:

Hypothesis 5b: There will be a stronger positive relationship between overall fit

score and adjustment to college, and affective commitment for students in their

first year of college.

Hypothesis 5c: Similarly, there will be a stronger negative relationship between

overall fit score and intentions to leave the school or transfer for students in their

first year of college.

The dual process nature of the JD-R model suggests that resources and demands

should not be related to all of the outcomes, but instead resources should be related to one

outcome and demands to another. However, research suggests a complicated web of

relationships between turnover intentions, job demands, and resources. Some studies

have demonstrated relationships between turnover intentions and job resources (e.g.,

Korunka et al., 2009) and others link turnover intentions to job demands (e.g., Hu et al.,

2011) and still others have shown that turnover intentions are related to both demands

and resources (e.g., Knudsen et al., 2009). Additionally, most of these models have linked

turnover intentions to resources and demands through a mediator such as emotional

exhaustion (e.g., Knudsen et al., 2009) or engagement (e.g., Korunka et al., 2009). Because there are no mediators in the current study, dual processes are not predicted here.

However, the JD-R model does predict an interaction between demands and resources to predict several outcomes, particularly well-being (Bakker & Demerouti, 2007). Using this framework, an interaction between fit and dispositional resilience is hypothesized in the current research:

> *Hypothesis 6:* There will be a significant interaction between fit and resilience such that there will be a change in the strength of the relationship between the variables and individuals with higher resilience and fit scores will show the highest levels of adaptation and adjustment to college as well as affective commitment. Conversely, these individuals will show the lowest levels of intentions to leave or transfer from the school.

CHAPTER SIX

METHOD

Participants

Participants were recruited from three diverse undergraduate populations at The Citadel ($N = 171$), Clemson University ($N = 112$), and Montreat College ($N = 112$). These schools provided three separate environments in which to test the hypotheses, including a mostly male student body and military college, rural and urban campuses, a large student body and a smaller private school (see Table 2). Students were recruited through e-mail and in their classes. School administrators from each school sent an e-mail to all undergraduates to announce and explain the upcoming study. In each case, the e-mail encouraged students to participate, but emphasized the voluntary nature of participation. When the study began, students received a formal invitation to participate in another e-mail. The invitation included a brief description of the study and information about informed consent. Students who wished to participate were directed to a web-based survey where their responses were collected anonymously.

Once a student completed the survey, he or she could enter his or her name into a raffle for a variety of incentives including iPods and cash prizes. Umatch collected personal information that allowed them to distribute the prizes to the winners, but this data was not connected to survey responses or retained by researchers.

Before the study began, Clemson University's Institutional Review Board (IRB) approved the materials and procedure upon the receipt of letters from the other institutions involved. Each school sent a letter of formal consent and agreement with the

procedures outlined in the IRB application and this was submitted to Clemson's IRB. Additionally, the Clemson IRB application noted any deviations in procedure, particularly related to incentives, relevant to each school. All data were collected before the start of the dissertation and as part of work with Umatch, Inc.

Measures

Demographics

Participants completed measures that assessed their gender, age, year in school or class status, father's highest level of education, mother's highest level of education, number of people in the student's family who attended the student's current school, family's socioeconomic status (Appendix A). Additional questions assessed the student's current grade point average (GPA), high school GPA, ACT score, as well as SAT math, critical reading, and writing scores. Except for the item assessing the student's age, all questions were multiple-choice and each topic was assessed by a single item.

Responses were coded such that higher numbers almost always indicated more of a construct or higher scores. Males were coded as 1, females as 2. Class status was coded such that students in their first year at a school were coded as 1, while those in their 4th or senior year were coded as 4. For items assessing parental education, parents with less than a high school education were coded as 1, while parents with an advanced degree including a Masters, Ph.D., J.D., or M.D., were coded as 7. Students who were not legacies or who were the first in their family to attend that particular school were coded as 1, while those who had three or more family members at that institution were coded as 4. Family socioeconomic status was coded as 1 for students who responded "Very poor,

my family struggled to get by each month" and 5 for "very wealthy, my family had more money than most people." GPA was coded as 1 for a GPA of 1.50 or lower. GPAs of 3.76 to 4.00 were coded as 11. SAT scores between 200 and 290 were coded as 1, scores between 700 and 800 were coded as 6, and those that chose not applicable were coded as missing data and not included in analyses. ACT scores between 11 and 18 were coded as 1, 19 to 21 as 2, 22 to 24 as 3, 24 to 27 as 4, 28 to 36 as 5, and not applicable as missing data not included in analyses. These intervals were created using data on the distribution of ACT composite scores such that relatively equal percentages of students had scores within each interval.

Dispositional Resilience

All measures of resilience were created using items freely available in the public domain along with those available in scholarly literature and items developed specifically for this project (Appendix B). Students saw the following instructions:

Instructions: This section includes several phrases describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes *you*. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then fill in the bubble that corresponds to the number on the scale.

Students were told to select a 1 if the statement was "Very inaccurate", a 2 for "Moderately inaccurate" statement, a 3 for "Slightly inaccurate" statements, a 4 for "Neither inaccurate nor accurate" statements, a 5 for "Slightly accurate" statements, a 6 for "Moderately accurate" statements, and a 7 for "Very accurate" statements.

Hardiness. *Commitment* was assessed using 4 items from Sinclair and Oliver (2004) and two items developed for the current study. A sample item includes "I enjoy most things in my life." *Challenge* was assessed with 6 items from Sinclair and Oliver (2004) and 2 items developed for the current study. A sample item includes "I enjoy learning from my mistakes." *Control* was assessed using 4 items from Judge, Erez, Bono, and Thoresen (2003) and 3 items from Goldberg (1999). A sample item includes "My successes are related to the choices I make."

Core self-evaluations (CSE). *Locus of control* was evaluated using the same 4 items from the hardiness and control measures. *Emotional stability or neuroticism* was assessed by 3 items from Judge et al. (2003). A sample item includes "There are times when things look pretty bleak and hopeless to me." This sample item was reverse-scored, however, such that higher scores on this item indicated greater levels of neuroticism or less emotional stability. *Confidence or self-efficacy* was assessed by 5 items from Goldberg (1999), 2 items from Chen, Gully, and Eden (2004), and a single item developed for this study. An example item includes "When I try, I generally succeed." *Self-esteem* was evaluated using 2 items from the Rosenberg Self-Esteem measure (Rosenberg, 1989). A sample item includes "I take a positive attitude toward myself."

Positive psychological capital (PsyCap). *Confidence or self-efficacy* was measured using the same 8 items used to evaluate CSE and self-efficacy. *Optimism* was assessed using 5 items from Goldberg (1999). A sample item includes "I don't expect things to go wrong for me." *Hope* was assessed using 6 items from Snyder et al. (1996). A sample item includes "I can think of many ways to reach my current goals." A separate measure of the *resilience* facet was not included because it was deemed redundant with the other measures of resilience described here. Additionally, resilience is also the higher-order construct and thus it is not appropriate to measure it at the facet level.

Objective Fit

Measuring objective fit was more complicated than any of the other measures in the current study. First, this measure was created for the purpose of this study through the collaboration of Umatch personnel, the author, and the author's advisor. Research by Wintre et al. (2008) identified 17 relevant characteristics that may be used to match students and colleges and this research was used as a starting point for generating the measure used in this study.

Fifty items assessed eight critical domains of fit, including athletics, academics, climate, financial, off campus, on campus, social, and student body dimensions (Appendix C). *Academics* were assessed with 10 items. One such item included "Admission to the school is relatively difficult (e.g., many applicants don't get chosen)." Three items assessed the *athletic* programs at the school. An example of an item would be "School has strong varsity sports." *Climate* was assessed with 4 items including "School is in a warm weather location." *Financial* aspects of the school were assessed

with 3 items, including "School tuition is less than $7,500 per year." *Off campus* environment was assessed with 7 items including "School is located near a major airport." *On campus or campus life* was assessed with 6 items including "I am able to live on campus." *Social* fit was assessed with 9 items including "School has a strong presence of Greek life (e.g., fraternities or sororities)." *Student body* was assessed with 8 items, including "School has a mostly male student population."

Items that could not be measured objectively through statistics published about an institution were deleted. For example, items such as "School has a good reputation for my program as a major" could not be objectively scored because the current study did not ask for the student's major. While this item was of interest to the researchers, it was excluded from the current study. This trimmed the list of 50 characteristics down to 47 items. Along with these items, students saw the following instructions for reading and rating these items:

> *Instructions:* Listed below are several characteristics of schools that might affect a student's decision to attend a school. Some of these attributes might have been very important in your decision to attend your school, some of them might be unimportant, and others might be characteristics that were important for you not to have. Please tell us how important each of these factors was in your decision to attend your school.
>
> 1 = Very important NOT to have this characteristic.
>
> 2 = Moderately important NOT to have this characteristic.
>
> 3 = Slightly important NOT to have this characteristic.

4 = Neutral/does not matter.

5 = Slightly important to have this characteristic

6 = Moderately important to have this characteristic

7 = Very important to have this characteristic

These items were then coded such that for each item, a student had a score ranging from -3 to +3. Then, with help from school administrators and research on each school, each item was coded for each school such that if the school had a given characteristic (such as tuition less than $7,500 per year or more than 10,000 students), it was scored as a +1. If the school did not have that attribute (such as a school with tuition costing more than $7,500 per year), then it was given a score of -1. Then, the importance score a student gave an attribute, ranging from -3 to +3, was multiplied by the score indicating the presence or absence of a given attribute, ranging from -1 to +1. Thus, each item had a score between -3 and +3 that was based on both the student's assessment of how important it was that a school have a particular characteristic and whether the school the student attends actually has such an attribute. Thus, the scoring possibilities for each item are as follows:

	School has the Characteristic (+1)	School does NOT have the Characteristic (-1)
Student Rating is Positive (+1 or Better)	Positive (+1, +2, +3) Good Fit	Negative (-1, -2, -3) Poor Fit
Student Rating is Neutral (0)	Neutral (0)	Neutral (0)
Student Rating is Negative (-1 or Worse)	Negative (-1, -2, -3) Poor Fit	Positive (+1, +2, +3) Good Fit

A positive final score indicates that a school has an attribute that the student wants or does not have something the student does not want, both of which indicate good fit between the student's preferences and the school's attributes. Conversely, negative fit exists when a student does not want something that a school has or a school does not have something a student wants. These individual item scores were then averaged for each dimension or category of items such that all items assessing the fit between the student and the school related to financial aspects of the school created a financial fit score for the student.

This method of scoring was used rather than simple difference scores between the environment and individual preferences because this method will reveal findings obscured by difference scores (Edwards & Cable, 2009; Kristof-Brown, Zimmerman, & Johnson, 2005; Verquer et al., 2003). The two predominant methods for computing fit are correlations and difference scores (Verquer, Beehr, & Wagner, 2003). Meta-analyses revealed that difference scores have weaker relationships with many variables of interest including job satisfaction and intent to turnover (Verquer et al., 2003). However, difference scores are often used because it provides information on elevation or the comparison of means on underlying dimensions between the individual and the environment, dispersion or the comparison of standard deviations on different dimensions, and shape or comparison of the rank order (Rounds, Dawis, & Lofquist, 1987). Thus, a type of difference scoring method is used in the current study.

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Outcomes

      Adjustment to college. Student adjustment to college was assessed using items based on Baker and Siryk's (1984) Student Adjustment to College Questionnaire (SACQ). Items were selected from the longer, original measure based on the recent factor analysis by Taylor and Pastor (2007). This measure includes four sub dimensions including social, emotional, academic, and institutional adaptation. *Social adaptation* was measured using 5 items and contained items such as "I have several close social ties at college" (Appendix D). *Emotional adaptation* was measured with 5 items including "I have been getting angry too easily lately." This emotional adaptation item was reverse scored such that higher scores on the emotional adaptation scale indicated greater emotional adjustment. *Academic adaptation* was measured with 4 items including "I am enjoying my academic work at college." *Institutional adaptation* was measured with 4 items including "I wish I were at another college or university." Institutional adaptation differed from intentions to leave and/or transfer because the latter refers to actual intentions and behaviors rather than simply desires and thoughts. Students responded to these items using a seven-point Likert scale with responses ranging from 1 or "Strongly Disagree" to 7 or "Strongly Agree."

      Affective commitment. Affective commitment was assessed by 4 items based on Meyer, Allen, and Smith (1993). An example of an item from this scale is "I feel a strong sense of 'belonging' to my school." Students used a seven-point Likert scale to indicate their level of agreement with statements. Responses ranged from 1 or "Strongly disagree" to 7 or "Strongly agree."

Intentions to leave and/or transfer and search behaviors. Intentions to leave one's current school were measured by 3 items from Hom, Griffeth, & Sellaro (1984). An example of an item includes "I often think about leaving this school." Search behaviors and transfer intentions were assessed with 4 additional items based on work by Kopelman, Rovenpor, and Millsap (1992). An example of an item includes "Looked for a new school online." Responses used a five-point frequency scale ranging from 1 or "Never" to 5 or "Nearly every day."

CHAPTER SEVEN

RESULTS

Data Screening and Cleaning

Initial examination of the demographics demonstrated that there were approximately one hundred participants from each school and a relatively even distribution across years in school (Table 3). An overwhelming majority of students, 86.5%, reported that their families were of average or better financial status. The majority of students, 88.3%, also reported a GPA of 3.00 or higher in high school. Fewer students, 68.4%, reported a current GPA of 3.00 or better. Students at each school appeared quite similar to those at the other institutions.

Prior to testing the hypotheses, the data was examined to determine whether there were any distributional problems. Several variables showed some evidence of positive kurtosis, indicating a leptokurtic distribution with more values clustered around the mean and fewer data points in thinner tails (Cozens & Jacobs, 1961; Joanes & Gill, 1998). Of particular concern were several items related to intentions to leave and search behavior. However, no actions were taken on the basis of this evidence alone.

Subsequently, the reliability of each scale was examined and with a few changes, all met acceptable professional standards for reliability, particularly when considering the small number of items involved in each (e.g., Connelly, 2011; Cortina, 1993; Sijtsma, 2009). The reliability of the locus of control scale was relatively low. The reliability of the original locus of control items was relatively low, as measured by Cronbach's alpha. However, removal of the third item improved the alpha of the scale from .60 to .63 with

the removal of that reverse-scored item. Similarly, the two reverse-scored items from the original self-efficacy items harmed the reliability of that scale. Removing both the third and fifth items improved the reliability of the scale from .85 to .92. Removing the second item from the neuroticism scale improved reliability from .50 to .76. Removal of the third item in the optimism scale improved reliability from .68 to .76.

In terms of the outcome variables, removing the third item from the academic adjustment scale improved reliability from .78 to .86. Similarly, removing the third item from the institutional adjustment scale increased reliability from .83 to .87. Thus, these scales were recalculated without these items and these updated scales were used for the remainder of the analyses.

Calculations demonstrated that the internal consistency of the total adjustment to college scale, created using items from the social, academic, emotional, and institutional adjustment subscales, showed that the reliability of the total scale might be increased by .01 by subtracting the third academic adjustment item. However, this item was not deleted because it contributed to the reliability of the academic adjustment subscale. Additionally, the estimated increase in reliability gained by the subtraction of the item was minimal.

Initial screening of the data and scales revealed strong patterns of relationships between the variables (Table 4). Of particular importance, high school and college grade point average (GPA) appeared to have significant relationships with many of the outcome variables as well as some of the predictor variables. This is consistent with previous research demonstrating strong relationships between high school and college GPA and

retention (e.g., Mattern, Woo, et al., 2010; Robins, Fraley, Roberts, & Trzesniewkski, 2001) as well as other variables including demographics and individual difference variables (e.g., Schmitt et al., 2009; Wessel, Ryan, & Oswald, 2008) such as need for achievement (e.g., Friedman & Mandel, 2011-2012). Thus, in order to better understand the relationships between the predictors and outcomes, high school and college GPA were controlled for in regression analyses. That is, high school and college GPA were entered as the first step or block of predictors in regression analyses. As a result of this, any relationships found between the predictors and criterion variables indicate that these variables predict the outcomes above and beyond high school and college GPA.

Dimensions of College Fit

Several exploratory factor analyses (EFAs) were conducted using the data from the college fit dimensions measure in order to best understand the underlying dimensions of fit. Several characteristics of the data ensure that factor analyses were appropriate. Worthington and Whittaker (2006) recently stated that in most cases, a sample size of 300 is sufficient. The current dataset, including results from all three schools, includes data from more than 300 individuals. This meets the standards recommended by a number of reviews and recommendations for exploratory factor analysis (e.g., Tinsley & Tinsley, 1987).

An additional test of factorability is the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. This measure indicates the extent to which the correlation matrix contains true factors or merely those found by chance. Tabachnick and Fidell (2001) have concluded that values greater than .60 indicate data ready for good factor analysis. In the

current study, results demonstrated KMO values ranging from .77 to .89, thus exceeding the standards set by Tabachnick and Fidell and recommended as part of a thorough factor analysis (e.g., Henson & Roberts, 2006; K. O'Brien, 2007; Pohlmann, 2004; Russell, 2002).

Factor analysis (FA), rather than principal components analysis (PCA), was used in the actual EFAs because FA is better suited to scale development as it includes only common variance shared by the items or indicators in order to approximate the latent factors or dimensions. While multiple methods of factor analysis are available, research indicates that the two most popular methods are maximum likelihood and principal-axis factoring, both of which are relatively equal in their ability to detect factors (Gerbing & Hamilton, 1996). However, Gorsuch (1997) recommends the use of principal-axis factoring because correlations of the proposed scales with the factor or factors are not inflated beyond true item loadings that occurs when the item is in both the factor and the scale. Similarly, Fabrigar et al. (1999) recommend the use of maximum likelihood for extracting factors when the data are normally distributed. An examination of the data plots reveals some deviations from normality, thus arguing for use of the principal-axis factor method, although both methods were used on preliminary analyses of the data and results were remarkably similar.

Next, both varimax, an orthogonal method, and promax, an oblique method of rotation, were used to compute the EFAs. Results yielded virtually identical results. However, current best practices (e.g., Browne, 2001; Worthington & Whittaker, 2006) recommend that an oblique rotation technique, such as promax, be used. Oblique

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rotations such as promax are used when the variables are correlated, as in the current

dataset, to avoid the overestimation of loadings (Worthington & Whittaker, 2006). Thus

the EFA results used to create subscale scores are based on promax rotation.

Researchers tend to agree that determining the number of factors based upon

those that have eigenvalues greater than 1.0 may lead to the misidentification of factors

(Kaiser, 1958; Larsen & Warne, 2010). Thus, scree plots are used to examine the point at

which there is a large decrease in eigenvalues (Costello & Osborne, 2005). The scree plot

for the fit data suggests several possible total numbers of factors while ten factors have

eigenvalues greater than 1.0. Several EFAs were conducted in which the analysis was

constrained to a 10-factor solution, but these models showed very little deviation from the

final model used and recommended here and thus the dimensions of college fit are

examined in terms of ten factors.

There are conflicting opinions about whether to use listwise or pairwise deletion

of missing variables when conducting exploratory factor analyses (Schreiber, Stage,

King, Nora, & Barlow, 2006). While listwise deletion may yield a much smaller sample

size, other researchers have argued that pairwise deletion may yield problematic

covariance matrices (e.g., Kamakura & Wedel, 2000). Thus, exploratory factor analyses

were conducted using both pairwise and listwise deletion of missing variables and

compared to examine any differences. While listwise deletion did reduce the sample size

from approximately 346 to about 316 responses per item, the effect on factor structure

and loading was virtually nonexistent. Because there was relatively little difference in

results due to the different missing data methods, listwise deletion was used in the final

analysis because it is a more conservative use of data and does not have problems with the covariance matrix.

Researchers disagree about the exact decision making process that takes place after the determination of the total number of factors, though there are some recommended best practices that are used here. For example, in order to obtain a solution with approximate simple structure, Worthington and Whittaker (2006) advocate dropping items that that cross-load too highly on multiple factors. Specifically, several researchers recommend against including items that have cross-loadings higher than .32 because this indicates that the item is too complex and reflects multiple factors or 10% shared variance between those factors (Costello & Osborne, 2005; Tabachnick & Fidell, 2001; Worthington & Whittaker, 2006). Other researchers (e.g., Watson & Thompson, 2006) have extolled the values of using only items with loadings of .40 or greater. Thus the current analysis follows both of these recommendations, retaining items with loadings greater than .40 on the primary factor and no cross loadings greater than .32.

Examining the preliminary EFAs demonstrated that there were several items that were potentially problematic. Item 41, referring to Greek life on campus, had its highest loading of .32 on the fifth factor and thus was dropped from the final factor solution because it did not have a high enough loading on a single factor. Similarly, item 25, referring to the proportion of the student body that is male, had a loading of .38 on the fourth factor and .38 on the eighth factor. Because these loadings were equivalent and fairly low, this item was removed from the final solution. Item 32, which dealt with off-campus recreational activities, had loadings of .42, .32, and .38 on factors 3, 5, and 7,

respectively. These loadings were similar in size to each other and thus the item seemed to reflect multiple factors so it too was dropped. Item 11, addressing the desire for a small town around the campus, had loadings of .35 and .43 on factors 3 and 10, respectively. This item reflected multiple factors so it was dropped from the final solution. Finally, item 37, reflecting the ease of admission, was also dropped because it had loadings of -.55 and .51 on factors 5 and 8, thus reflecting multiple factors and was dropped.

When subsequent exploratory factor analyses were conducted without items 25, 32, 37, and 41, the structure of the factors was much more clear and items for each factor were theoretically consistent. Recommendations for factor analyses suggest that factors should be retained only if there are at least three indicators, preferably with loadings of .5 or higher (Costello & Osborne, 2005). Tabachnick and Fidell (2001), however, maintain that it is possible to retain factors with only two items as long as those two items have a strong relationship, defined as those with a correlation of .70 or higher. Using these suggestions to examine the pattern matrix of the rotated factor solution demonstrates that many of the factors appear to meet these basic guidelines, with items clearly loading on distinct factors (Table 5).

However, by eliminating several items, these factors reflected even more consistent dimensions of the college experience. The fourth item loading on the first factor, dealing with the traditional nature of students, had a much lower loading than did the other items (.56 compared to .76, .97, and .99) and did not appear consistent with the other items that dealt with a campus students could live on and within walking distance or walk to classes rather than drive. Thus, this fourth item (item 15) was cut from the

final calculations of sub-scales, creating a theoretically logical factor with three indicators.

Similarly, item 29, addressing the political activism of students, was problematic in terms of the theoretical interpretation of the items loading on the third factor. This item had a loading of .50 compared to the other six items, which had loadings both higher and lower than the other items. However, this item was removed from the interpretation of the dimensions used to create subscale scores because it was not theoretically consistent with the other items loading on the third factor. The items that were retained reflect the feel of the reputation of the school as well as the academic environment, neither of which are theoretically connected to student political activism. Similarly, item 17, which refers to the opportunity to do research with faculty, was removed from factor 3 because it had a low loading of .40 and poor theoretical fit with the other items reflecting this factor.

Factor 8 only had two items, which would seem to violate some of the recommendations for determining the number of factors. However, Tabachnick and Fidell (2001) recommended that two-item factors be retained if the items have a strong relationship with each other. A simple correlation between the two items revealed a strong positive correlation, $r = .71$, $p < .01$ between the items. Both items dealt with a student's preference for religion at school and thus the factor is theoretically sound and meets recommendations for a two-item factor.

Lastly, the tenth factor did not have enough items with loadings greater than .32 to justify including it in the final solution. Thus, although scree plots and eigenvalues suggest a ten-factor solution, the tenth factor did not have enough items to reflect it nor

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did it have theoretical meaning. Additionally, a nine-factor solution accounted for a majority of the data or 58.43% of the variance. Thus nine factors were used to interpret the dimensions of college fit and nine scale scores were created reflecting different factors (Table 6).

The first factor included items related to a student's ability to live on campus and walk to classes from home or from one parking space rather than driving to different classes. Thus, the three items that comprised the first factor dealt with campus convenience and had a Cronbach's alpha value of .87. The second factor dealt with sports on campus and student support for varsity athletics, including football with a Cronbach's alpha value of .92. The third factor included five items addressing campus reputation and feel, from the importance of the campus ranking to traditional feeling and boundaries. The fourth factor dealt with items that were all related to Southern cities. Specifically, this factor included six items reflecting desire to live in a warm climate in a metropolitan area. This factor included an item assessing military presence, which might have been seen as reflecting the influence of students at The Citadel. However, this item remained a part of this factor even in analyses that excluded data from The Citadel and thus it was retained here. Both the third and fourth factors had Cronbach's alpha values of .77, respectively.

The fifth factor pertained to the ethnic and international diversity of students as well as the variety of clubs for socializing. This factor had a Cronbach's alpha value of .83. The sixth factor included items related to the cost of living and tuition at a given school and had a Cronbach's alpha value of .86. The seventh factor reflected a student's

desire to be at a small school, with a small student body and classes, which is why the third item about a large student body was reverse scored for interpretation. The seventh factor had a Cronbach's alpha value of .63. The eighth factor reflected a student's desire for religious affiliation of the school and presence of religious groups on campus and had a Cronbach's alpha value of .83. The ninth factor reflects social activities available, from those done outside in summer or winter to off-campus social activities. This last factor had a Cronbach's alpha value of .78. Thus, the nine factors were relatively different from those originally hypothesized, but still reflected the importance of cost, campus aesthetics, social activities, religion, athletics, and academics.

Objective fit was highest for the convenient campus and small school dimensions of fit, as indicated by their scale means of 1.61 and 1.19, respectively. These two dimensions were the only ones with means greater than 1.00. Conversely, fit appeared to be relatively poor for the student body and social as well as the financial fit dimensions, which had scale means of -.26 and -.06, respectively. These two dimensions were the only ones with negative mean scores. The remaining five dimensions had means greater than zero, but still less than 1.00, indicating fairly neutral fit. This collection of means also indicates that there are not any major range restriction issues.

Models of Resilience

The second hypothesis stated that a confirmatory factor analysis of all facets of hardiness, core self-evaluations, and positive psychological capital would demonstrate support for one higher order resilience factor. Thus, confirmatory factor analyses were first conducted in order to compare the fit of these different models. Specifically, several

models were compared, including one in which all of the items loaded on a first order factor [X^2 (703) = 3923.83, CFI = .65, SRMR = .09, RMSEA = .12, Table 8] and a model in which the eight facets of the composite traits loaded on eight first order factors [X^2 (751) = 1835.22, CFI = .83, SRMR = .07, RMSEA = .06]. A third model in which the facets were first order factors and hardiness, CSE, and PsyCap were second order factors was also examined [X^2 (689) = 2600.61, CFI = .79, SRMR = .09, RMSEA = .10]. In this model, efficacy cross-loaded on both PsyCap and CSE, and control cross-loaded on CSE and hardiness. All of these models showed relatively poor fit, with low comparative and normed fit index scores and high root mean square error of approximation (RMSEA) and standardized root mean residual (SRMR) scores.

Based on the Lagrange Multiplier (LM) Test, when freely estimated, several error covariances were identified that might improve the fit of these models (Chou & Bentler, 1996). These error covariances were specified by the LM test, but were only added to the model because they referred to error terms and those that were theoretically related because they were attached to indicators from the same factor or dimension. However, when these error covariances were added to each of the three models already examined, it still did not lead to a model that fit the data very well. Thus, in order to better understand the structure of the data and nature of the relationships between these facets, an exploratory factor analysis was conducted.

Using the recommendations for exploratory factor analyses reviewed earlier (e.g., Tabachnick & Fidell, 2001; Worthington & Whittaker, 2006), the final analysis of resilience dimensions used listwise deletion of missing data and a promax rotation, which

allowed the factors to correlate with each other. The use of exploratory factor analysis for understanding the dimensions of resilience is supported by the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Once again, the KMO values exceeded the recommended .60 value set by Tabachnick and Fidell (2001), with values approximating .94. The eigenvalues and scree plots were examined and showed strong evidence of at least one factor. However, the first factor only explained about 45% of the variance, while a seven-factor solution explained a little more than 70% of the variance. Thus, a seven-factor solution was pursued and explored further.

Using the recommendations reviewed earlier for eliminating low-loading and high cross-loading items pointed to the utility of removing the fifth item from the control scale. This item was reverse-scored, but had similarly low loadings of approximately .40 on three different factors. Thus, the final EFA used to determine dimensions of resilience excluded this item.

There were several items that had relatively similar cross loadings on multiple factors (Table 7). At this point, in determining which factor the item would be considered a part of in constructing sub-dimensions with scores, several of the items were grouped with the factor for which the item had the highest loading (Table 9). This was true for the third hope item, the sixth hope item, the second esteem item, the third commitment item, and the second challenge item. The first esteem item was grouped in with the second and thus it was considered part of the first factor even though it technically loaded higher on the second factor. But in reading the items, it made sense to group the esteem items

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together and with the first factor, which all referred to how an individual sees him or herself and his or her abilities.

Though the data could be seen as supporting a seven factor, model because seven factors had eigenvalues greater than one, only the first two control items loaded highest on the seventh factor. The other control items had highest loadings on the fourth factor, where these first control items also had relatively strong loadings. Thus, the control items were kept together and considered the fourth factor.

Except for the first two factors, items from a particular facet or existing scale clustered together. The first factor clearly reflected an individual's beliefs about goals and his or her ability to meet them. This factor was comprised of 14 items, six from the efficacy scale, six from hope, and two from esteem. The second factor referred to an individual's purpose and how the person makes sense of life. This second factor was comprised of eight items, six from commitment scales and two from challenge.

The items that made up the remaining dimensions loaded on factors that correspond to optimism, control, challenge, and neuroticism. Ultimately, the resilience items were grouped into six factors and six dimensional scores were created reflecting resourcefulness, purpose, optimism, control, challenge, and neuroticism.

Additionally, confirmatory factor analyses were conducted to examine the fit of the models identified through exploratory factor analysis. First, the six-factor model described was tested, then error covariances identified by the LM test were added and fit of this model was examined (Model 4, Table 8). Because of the original hypothesis that all dimensions of resilience would load on a higher order facet, the six-factor model was

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altered to include a higher order factor that all of the other facets loaded (Model 5, Table 8). Then, error covariances identified by the LM test were included in a test of the revised model. All of these results revealed that fit was improved by the addition of error covariances, and this EFA-based model fit the data better than a single first order factor model or a third-order factor model. It is also important to note that the addition of a higher order factor for which all of the first order factors loaded on did not greatly harm the fit of the model, which is used as an additional rationale for the use of an overall resilience factor in testing the interaction between resilience and fit as per the last hypothesis.

The Predictive Power of Fit and Resilience

Because high school and college grade point averages were so highly correlated with the outcomes of interest and several of the other independent variables, these two variables were entered as the first block of predictors in all regression analyses. Thus, the effects of these results were controlled for and the impact of the predictors of interest was isolated. This allowed for better testing of the hypotheses.

Resilience

The results of the exploratory factor analysis of the resilience items identified six separate dimensions. These dimensions were used to test the third hypothesis that predicted those with higher scores on the resilience facets and overall resilience score would have higher scores on measures of commitment and adjustment and lower levels of searching for other colleges and intentions to transfer.

In order to test this hypothesis, the control variables were entered as the first block of predictors, followed by the resilience dimensions in the next block. Separate regressions were conducted for each of the dependent variables, one per affective commitment, transfer intentions and search behaviors, emotional adjustment, social adjustment, academic adjustment, and institutional adjustment. These six regressions revealed that the resilience dimensions significantly predicted all six outcome variables, indicating support for the third hypothesis (R^2 = .20, .10, .30, .32, .47, and .20, respectively; Tables 10 – 11). All of these values were significant at the $p < .01$ level. Similarly, the resilience block of predictors significantly predicted the outcomes of interest above and beyond high school and college GPA (ΔR^2 = .16, .08, .29, .29, .23, and .13, respectively). And again, all of these R^2 change values were significant at the $p < .01$ level.

Delving into the predictive power of the dimensions of resilience demonstrated the importance of several dimensions, particularly purpose. Purpose was a significant predictor of every outcome except emotional adjustment (β = .41 for affective commitment, β = -.33 for transfer and search behaviors, β = .44 for social adjustment, β = .30 for academic adjustment, β = .24 for institutional adjustment, Tables 12 – 13). Again, all of these coefficients were significant at the $p < .01$ level. Purpose was the only resilience dimension that significantly predicted affective commitment and transfer and search behaviors.

Neuroticism was also an important predictor of several outcomes. It was the only significant predictor of emotional adjustment (β = -.51, $p < .01$). It was also a significant

predictor of institutional adjustment ($\beta = -.21$, $p < .01$). It is important to note that these are negative coefficients, indicating that higher neuroticism scores were associated with lower or worse adjustment, which is in line with predictions.

Optimism and control were the only other dimensions that significantly predicted any outcomes. Control significantly predicted academic adjustment ($\beta = .14$, $p < .05$). Optimism significantly predicted institutional adjustment ($\beta = -.14$, $p < .05$). Optimism joined purpose, neuroticism, and resourcefulness ($\beta = .21$, $p < .01$) as significant predictors of institutional adjustment, but the other dimensions were significant at the $p < .01$ level while optimism unexpectedly had a negative coefficient that was significant at the $p < .05$ level.

Optimism's negative relationship with institutional adjustment indicates a reversal in the nature of the relationship between these two variables as indicated by the correlation between them ($r = .16$, $p < .01$). The collinearity diagnostics, however, suggest that there is not great reason to be concerned about multicollinearity (tolerance = .98, variance inflation factor = 1.02), while many researchers suggest that tolerance values less than .1 may indicate the presence of multicollinearity (e.g., Lin, 2008; R. O'Brien, 2007). Thus, the relationship between optimism and institutional adjustment is surprising, but does not indicate a need for any alternative analyses.

Thus, the overall block of resilience variables significantly predicted all of the outcomes of interest. Purpose significantly predicted all of the outcomes of interest except for emotional adjustment, while neuroticism and control were the sole significant

predictors of emotional and academic adjustment, respectively. Resourcefulness joined purpose, optimism, and neuroticism as significant predictors of institutional adjustment.

College Fit

The fourth hypothesis predicted that those with greater levels of fit would show greater levels of affective commitment and emotion, social, academic, and institutional adjustment and lower levels of search behaviors and transfer intentions. This hypothesis was tested by entering the control variables as the first block of predictors and then all of the nine fit dimensions as the second block of predictors in six separate regression analyses, one for each of the dependent variables.

Results supported this fourth hypothesis, as the block of fit predictors significantly predicted each outcome in all of the analyses (Tables 14 – 23). All but one – activities fit predicting institutional adjustment ($\beta = -.13, p < .05$) – of the fit dimensions that significantly predicted the adjustment and commitment outcomes had positive beta coefficients, indicating positive relationships between the predictors and these desirable outcomes. However, all but one of the significant fit predictors of transfer intentions and search behaviors – the activities fit dimension ($\beta = .15, p < .05$) – had negative beta coefficients, indicating that, as predicted, fit was inversely related to intentions to leave or transfer from a school and actions geared towards transferring.

When reviewing the predictive power of each fit dimension, results revealed that convenient campus and reputation and campus feel dimensions did not significantly predict any of the outcomes of interest. Conversely, the southern city, small school, and religion dimensions predicted four of the dependent variables. Specifically, southern city

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significantly predicted affective commitment ($\beta = .19$, $p < .01$), transfer and search behaviors ($\beta = -.14$, $p < .05$), social ($\beta = .22$, $p < .01$), and academic adjustment ($\beta = .16$, $p < .01$). The small school dimension of fit as well as the religion dimension significantly predicted affective commitment ($\beta = .19$, $p < .01$ and $\beta = .17$, $p < .01$, respectively), transfer and search behaviors ($\beta = -.23$, $p < .01$ and $\beta = -.14$, $p < .05$), social adjustment ($\beta = .16$, $p < .01$ and $\beta = .17$, $p < .01$), and institutional adjustment ($\beta = .18$, $p < .01$ and $\beta = .12$, $p < .01$). The student body and social dimension of fit significantly predicted affective commitment ($\beta = .15$, $p < .05$), emotional adjustment ($\beta = .16$, $p < .05$), and institutional adjustment ($\beta = .21$, $p < .01$). Lastly, the activities dimension of fit significantly predicted transfer and search behaviors ($\beta = .14$, $p < .05$) as well as institutional adjustment ($\beta = .15$, $p < .05$).

Most of the variables of interest were significantly predicted by several of the fit dimensions. The notable exceptions were emotional adjustment, which was only significantly predicted by the student body and social dimension of fit ($\beta = .16$, $p < .05$), and academic adjustment, which was only predicted by the southern city fit dimension ($\beta = .16$, $p < .01$). Affective commitment, transfer and search behaviors, social, and institutional adjustment were all significantly predicted by three or more dimensions of fit.

While the original fourth hypothesis included predictions about dimensions of fit having the strongest predictive relationships to outcomes measuring similar domains or dimensions, this exact hypothesis was not tested here. Because the original fit dimensions were not preserved by factor analyses, there was no longer an academic fit dimension to

correspond to academic fit, for example. However, there was a student body and social fit dimension, but this did not significantly predict social adjustment.

The number of significant interactions between fit and year varied by outcome and fit dimensions. No interactions significantly predicted affective commitment or social adjustment. Overall, the last three dimensions of fit – small school, religion, and activities – had the strongest interactions with year in school in predicting outcomes. Three separate fit by year interactions significantly predicted transfer intentions and search behaviors, more than any other outcome variable.

Fit by Year Interactions

In order to test the fifth hypothesis, the year and fit dimensions were all mean-centered. Then, an interaction term was computed for year by each fit dimension. In order to test the fifth hypothesis that fit will be a better predictor of all outcome variables for individuals in their first two years of college, several regressions were conducted using this interaction term. Separate regressions were conducted for each outcome variable and then for each dimension of fit, yielding more than 50 sets of results (Tables 24 – 32), all of which are summarized (Table 33).

For each interaction test, the college and high school GPA variables were entered as controls in the first step. The second block of predictors contained the mean-centered dimension of fit examined as well as the mean-centered year in school variable. Finally, the interaction term, composed of the centered dimension of fit multiplied by the centered year in school variable, was entered in the regression.

The main effects in these regressions were significant more frequently than the interactions. That is, fit and year together significantly predicted above and beyond high school and college GPA for more types of fit and outcomes than the interaction between year and fit predicted above and beyond their individual effects in the second stage of the analysis. However, there was a significant interaction for at least one type of fit for each of the outcomes of interest. Of the 54 interactions tested, nine were significant, indicating almost 17% of those tested were significant.

The convenient campus dimension of fit – referring to whether a student wishes to live on campus and/or near classes and walk to classes – interacted with year in school to significantly predict affective commitment, social, and academic adjustment. Only the interaction between the convenient campus dimension of fit and year in school significantly predicted affective commitment (β = -.11, $p < .05$, $R^2 = .13$, $p < .01$, $\Delta R^2 =$ .01, $p < .05$; Figure 1). Similarly, the convenient campus fit by year in school interaction was the only fit by year interaction to significantly predict academic adjustment (β = -.16, $R^2 = .30$, $\Delta R^2 = .03$, all $p < .01$; Figure 3). The convenient fit by year in school interaction significantly predicted social adjustment (β = -.18, $R^2 = .16$, $\Delta R^2 = .03$, all $p < .01$; Figure 2), as did the small school dimension of fit (β = -.13, $p < .05$, $R^2 = .13$, $\Delta R^2 = .02$, $p < .05$; Figure 5).

The religion by year in school interaction was also an important predictor. This interaction significantly predicted transfer intentions and search behaviors (β = -.14, $p <$ .05, $R^2 = .06$, $p < .01$, $\Delta R^2 = .02$, $p < .05$; Figure 7) as well as institutional adjustment ($\beta =$ -.13, $p < .05$, $R^2 = .11$, $p < .01$, $\Delta R^2 = .02$, $p < .05$; Figure 8). Small school by year

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interaction also significantly predicted institutional adjustment (β = -.12, $p < .05$, $R^2 =$ .16, $p < .01$, $\Delta R^2 = .01$, $p < .05$; Figure 6).

Two fit by year interactions significantly predicted emotional adjustment to college. First, the southern city dimension of fit by year interaction significantly predicted emotional adjustment (β = .17, $p < .01$, $R^2 = .04$, $p < .05$, $\Delta R^2 = .03$, $p < .01$; Figure 4). Similarly, the last fit dimension, activities, significantly interacted with year in school to predict emotional adjustment (β = .12, $p < .05$, $R^2 = .03$, $\Delta R^2 = .01$, $p < .05$; Figure 9).

For almost all of the significant interactions, the predicted means and regression analyses reveal support for the fifth hypothesis that fit predicts the outcomes of interest better for those in the first half of their college careers. Except for the prediction of transfer and search behaviors as well as emotional adjustment, the predicted means were highest – or at least higher than for early college students with poor fit or those in college for more time with higher fit – for individuals in their first two years of college with high levels of fit. Similarly, the lowest predicted means were for those just starting college, but low in fit. This indicates that those in the early years of college show the greatest levels of adjustment when that particular dimension of fit is high. Conversely, when fit on the dimension of interest is low, those in the early years of college show the lowest levels of adjustment. The interaction between religious fit and year in school predicting transfer and search behaviors fits this pattern where individuals starting college with high degrees of fit show more desirable outcomes. This is because this group of people shows the lowest levels of search behaviors and transfer intentions, indicating less dissatisfaction with college.

Fit by Resilience Interactions

In order to test the hypothesis that resilience and fit would interact to significantly predict the outcomes of interest, more regression analyses were conducted. However, before these regressions could be analyzed, it was necessary to think critically about how to assess these interactions given that resilience appeared to take on several different dimensions. If one were to test each dimension of fit's interaction with each dimension of resilience, an enormous number of regressions and calculations would be the result. However, these analyses would not establish whether there is support for this last hypothesis while also remaining parsimonious enough to interpret in a meaningful way.

Considering both the theoretical rationale for combining multiple facets of resilience into one overall measure as well as the empirical evidence, the best way to test the interaction between different types of fit and resilience was to compute an overall resilience score. In terms of the theoretical reasons for viewing resilience as a composite trait, much of this evidence was reviewed earlier. However, additional evidence to support this idea comes from the fact that resilience could be reduced to a composite measure while fit did not as easily lend itself to a composite measure because of how inherently unrelated many of the fit dimensions are. Dimensions of college fit may also be likened to the different types of fit an individual has in the workplace – with one's job, supervisor, team, organization. Thus, there is precedence for utilizing separate dimensions of fit and evidence to suggest that they are not always related to each other.

While the factor analyses did not support the creation of a composite resilience measure for use in all of the subsequent data analyses, the correlations and early

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regressions do provide some empirical support for this idea. The correlations between the dimensions of fit indicate fairly strong positive relationships between the variables, except for neuroticism, which is inversely related to the other variables. This would be expected given that high positive scores on this measure indicated a lack of emotional stability or low levels of the resilience-related construct. Similarly, the regressions performed using the resilience dimensions to predict the outcomes of interest indicate that the different facets have varying relationships with the dependent variables. That is, to predict all of the outcomes of interest, a variety of resilience dimensions must be considered rather than only one or two facets. Plus, the group of facets significantly predicted all of the outcomes. All of this empirical evidence suggests that resilience facets may be computed into a composite score to use in the resilience by fit interaction tests.

Thus, dimensions of fit were considered separately while a composite score for resilience was computed from the average of scores on the separate facets of resilience. Then, high school and college GPA were included in the first block of predictors entered into a regression. Main effects or the mean-centered dimension of fit studied and the mean-centered resilience composite score were added in the second block of predictors. The last block of predictors contained the interaction term between the mean-centered resilience composite score and fit. This was done for each of the six outcome variables.

Results revealed that interactions that predicted significantly more variance above and beyond the main effects were clustered among only four of the outcome variables. None of the fit by resilience interactions significantly predicted above and beyond the

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main effects for affective commitment or social adjustment. Of the 54 interactions tested, 7 were significant. This means that almost 13% of the interactions tested were significant. Only the small school fit dimension by resilience interaction significantly predicted emotional adjustment (β = -.16, $p < .05$, R^2 = .04, $p < .05$, ΔR^2 = .02, $p < .05$; Figure 12). Similarly, only the resilience by religion fit dimension interaction significantly predicted institutional adjustment (β = .12, $p < .05$, R^2 = .11, $p < .01$, ΔR^2 = .01, $p < .05$; Figure 14).

Several interactions significantly predicted transfer intentions and search behaviors and academic adjustment beyond the main effects. The small school dimension of fit by resilience interaction significantly predicted transfer intentions and search behaviors (β = -.20, $p < .01$, R^2 = .11, $p < .01$, ΔR^2 = .03, $p < .01$; Figure 11), as did the religion dimension of fit (β = -.14, $p < .05$, R^2 = .05, $p < .01$, ΔR^2 = .02, $p < .05$; Figure 13) and the activities dimension of fit (β = -.13, $p < .05$, R^2 = .05, $p < .01$, ΔR^2 = .02, $p < .05$; Figure 15). Similarly, the southern city fit dimension by resilience interaction (β = -.09, $p < .05$, R^2 = .44, $p < .01$, ΔR^2 = .01, $p < .05$; Figure 10), as well as the activities by resilience interaction (β = -.13, $p < .01$, R^2 = .45, $p < .01$, ΔR^2 = .02, $p < .01$; Figure 16) significantly predicted academic adjustment beyond the main effects.

There is some variation in the predicted pattern of means depending on the dimension of fit and outcome examined, but the overall patterns indicate some support for the hypothesized interaction. Similarly, the majority of the interactions are in the hypothesized directions. For those low in small school, religion, and activities fit, resilience had little impact on transfer and search intentions. But for those higher in small

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school, religion, and activities fit, those with lower levels of resilience also had higher levels of undesirable transfer intentions and search behaviors.

Conversely, those high in resilience and small school or religion fit have the greatest levels of emotional adjustment. For those low in resilience, school and religion fit do not aid in predicting emotional adjustment. Southern city and activities fit have significant interactions with resilience on academic adjustment, but the patterns are slightly different from those predicting emotional adjustment. In these cases, those high in resilience have higher levels of adjustment, regardless of fit levels. Overall, however, the results demonstrate that those higher in resilience and fit show greater levels of adjustment while those lower in fit and resilience show greater levels of transfer intentions and search behaviors.

CHAPTER EIGHT

DISCUSSION

The goals of the present study included expanding upon previous research in educational psychology as well as applying concepts from industrial and organizational and occupational health psychology to college student retention. Additionally, the study focused on a broader model of resilience incorporating dimensions from several higher-order constructs. Lastly, the constructs used in the current study suggest potential interventions to increase individual resilience in order to avoid the costly consequences of dropping out or leaving a college. In order to understand the results and how they contribute to the goals of the study, the results related to each hypothesis will be discussed first. This will be followed by a summary of the limits of this study and recommendations for future work as well as the contributions and implications of this research.

Dimensions of College Fit

The first goal of this study was to expand upon previous research examining person-environment fit in the college setting. Previous work (e.g., Mattern, Woo, Hossler, & Wyatt, 2010) had used only a narrow set of variables to assess fit and, as a result, had concluded that the future of fit in predicting retention was bleak. However, the current study was able to use a wider set of variables to describe the college environment and more adequately capture how a student fits with different aspects of college life. By using research explaining the multitude of factors that influence a student's decision to attend a

particular school, it was possible to expand the dimensions of college fit to include a wider array of variables than previous studies.

The assessment of college fit in the current study supported the first hypothesis that factor analyses would differentiate several dimensions of college life. This exploration of a number of aspects of college life more closely mirrors the research done to assess fit in the workplace, which often includes how an individual fits with an organization, supervisor, team, and job, among other aspects of the work setting. Although the data analysis did not find support for the dimensions outlined originally, there was support for diverse factors and separation of campus attributes from social activities and the study body. One contribution from the current study is the integration of the college choice literature with the assessment of college fit research. Whether researchers or practitioners use this measure of fit in the future, additional validation studies should be conducted in order to refine the dimensions and better understand its psychometric properties.

In particular, future research should explore the effects of academic fit and how students perceive academic aspects of potential colleges when making their decision about which school to attend. Given the research indicating that high school students and their parents place great importance and value on the academic environment when choosing a school (e.g., Chapman, 1993; Warwick & Mansfield, 2003) as well as the direct connections between poor academic fit and intent to leave or transfer from a school, it was surprising to discover that none of the items intended to reflect an academic component of the environment appeared to reflect an academic-type factor. In

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fact, the reputation of the school, part of the third factor named "reputation and campus feel," was the closest any factor from the current study came to addressing academics.

Because the current study's measure of fit was influenced by research on college choice, the items were aimed at measuring the aspects of the academic environment that students choosing a school reported as important to their choice. However, these students may have difficulty assessing the academic environment accurately, at least compared to current students in the university setting who comprised the relevant sample in the current study. That is, items written to assess academic fit for current college students pose a unique challenge to researchers wishing to understand how the individual felt about academics before attending the school as well as current fit. This is likely due, at least in part, to the difficulty in observing the academic environment compared to the ease of observing physical attributes of a campus or other more easily objectively measured dimensions of campus. The complexities of assessing less easily viewed or observed actions and aspects of an environment have long been noted by researchers (e.g., Gosling, John, Craik, & Robins, 1998) and the current study is not immune to such issues.

It is worth noting that the academic environment items in the current study were dropped before examining how well they predict the outcomes of interest and thus this research is not stating that academics are irrelevant. Instead, it is important to remember that more research should be done to better understand how academic aspects of the environment influence fit rather than presuming them unimportant because they were not included in the results of the current study. Further research and refining of items should

be conducted before it is determined that academic fit is not an important predictor of college student retention.

Models of Resilience

The second hypothesis proposed that a confirmatory factor analysis would demonstrate support for a one-factor model of dispositional resilience. While the CFAs did not find overwhelming support for this model, EFAs were able to explain the relationships between the different facets and showed support for a different model. The model supported by the current study is a departure from existing work on core self-evaluations, hardiness, and positive psychological capital, which have been considered three distinct constructs.

The current study did show support, however, for strong relationships between the facets of these composite constructs. This study also suggested that the original eight facets – commitment, challenge, control, self-efficacy, self-esteem, hope, optimism, and neuroticism – could be reduced to six factors. If the higher order constructs were not related to each other, the results should show either eight distinct first order factors or three separate second-order factors that correspond to hardiness, CSE, and PsyCap. Further, the first factor in the current model, named resourcefulness, was comprised of self-efficacy, self-esteem, and hope. Self-esteem is one of the facets of core self-evaluations while hope is part of positive psychological capital and self-efficacy is considered part of both. Thus, this one factor demonstrates support for the idea that there is important overlap between the different composite constructs and their facets.

The factor analyses might not have yielded results that best supported a one-factor model, but the other data analyses did demonstrate evidence to support the use of all three second-order constructs or facets from all three in practice. The utility of facets from all three composite constructs is demonstrated by the regression analyses in which the block of six facets significantly predicted all of the outcomes of interest. The fact that all of the facets significantly predicted at least one of the outcomes underscores the importance of using a variety of facets to understand predictors of retention outcomes rather than relying on only one of the composite constructs.

The Predictive Power of Fit and Resilience

Resilience

The third hypothesis stated that those with higher scores on the measure of dispositional resilience would show greater affective commitment and adjustment to college and lower levels of intentions to transfer or searching alternative schools. This hypothesis was tested using all of the dimensions of resilience identified by the factor analyses conducted and the results strongly supported the hypothesis. The block of resilience dimensions significantly predicted all of the outcomes of interest. This indicates that these dispositional resilience facets are important predictors of proximal student retention outcomes.

Of particular interest is the finding that purpose, the second dimension of the resilience model here and composed of both commitment and challenge items, is a significant predictor of every outcome except for emotional adjustment. Not surprisingly, the only significant facet predicting emotional adjustment is neuroticism or emotional

instability. The significance of the block of resilience constructs for almost all of the outcomes suggests the potential use for hardiness when time and/or space are limited. That is, when it is difficult to measure all of the facets of the new resilience model or of the composite constructs, using hardiness or the purpose measure would likely yield the best results.

This purpose dimension suggests that while core self-evaluations may be a popular construct in the industrial and organizational psychology literature, studies that use only CSE and do not include this purpose dimension or aspects of hardiness may fail to capture important relationships. This is because the purpose dimension includes items from commitment and challenge, both of which are part of hardiness and not CSE. This purpose dimension deals with an individual's ability to find meaning and purpose in daily life and tasks, a general sense of excitement and eagerness to take on challenges and tasks.

Purpose in the current study is much like important psychological states that Hackman and Oldham have discussed as critical to understanding individual motivation and satisfaction on the job (Hackman, Oldham, Janson, & Purdy, 1975; Oldham & Hackman, 2010). In particular, experienced meaningfulness and responsibility are two of these critical states and they refer to an individual's feelings that his or her tasks matter and the actions that he or she takes contribute to important outcomes (Hackman et al., 1975). These states are obviously similar to the purpose dimension, which deals with the individual's ability to find meaning in and willingness to take on a variety of tasks.

Purpose is also quite similar to the task significance dimension of Hackman and Oldham's job characteristics model. According to this model, individuals who are able to see the importance of their tasks for other people's lives and works, experience job enrichment (Oldham, Hackman, & Pearce, 1976). Task significance is one of five job characteristics that lead to job enrichment and when present improve the individual's motivation, satisfaction, and performance. Thus, this new research confirms the importance of the Hackman and Oldham research while also expanding it to college life and a new model of resilience.

The importance of the purpose dimension also suggests the importance of meaning making. Previous research examining hardiness, benefit finding, and forms of meaning making tend to focus on individuals later in life or who have some experience with a life threatening event or illness (e.g., Bonanno, Galea, Bucciarelli, & Vlahov, 2007; Casey, 2011; Hou, Law, Yin, & Fu, 2010). However, the current research demonstrates that purpose, the dimension of the new resilience model most connected to meaning making, is important in helping college students adjust to the stress and changes of college life. These findings also build on research demonstrating that resilience has important protective effects on undergraduates (e.g., Hartley, 2011).

Additional evidence for the utility of this six-factor model of resilience is shown through these regression analyses in which each dimension, except for challenge, significantly predicts at least one outcome and each dependent variable is significantly predicted by at least one facet. However, it is worth remembering that some of the original challenge items actually loaded on the second factor of the new resilience model,

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the purpose dimension, and thus challenge is still involved in predicting institutional adjustment, as resourcefulness is a significant predictor of that outcome. Thus, these resilience facets are all important to understanding student retention and adjustment to college. Plus, the collection of these facets allows for a better, finer-grained understanding of these outcomes than would an overall resilience measure.

The results of these analyses suggest another interesting idea related to the relevance of the resilience dimensions to the different outcomes. The results showed that only purpose significantly predicted affective commitment, transfer intentions and search behaviors, and social adjustment. Neuroticism predicted emotional adjustment and both purpose and control predicted academic adjustment. Thus for all of the outcomes except for institutional adjustment, only one or two resilience dimensions were significant predictors. For institutional adjustment, resourcefulness, purpose, optimism, and neuroticism were all significant predictors. This indicates that while the dimensions of resilience did have importance for predicting all of the relevant outcomes, almost all of these factors significantly predicted institutional adjustment. This shows that more of the resilience dimensions were relevant to predicting this one outcome than any of the others, indicating the importance of multiple facets of resilience to institutional adjustment.

As previously discussed, the proximal outcomes and resilience predictors are important because both lend themselves to interventions. First, the proximal outcomes identify precursors to the costly action of transferring from or leaving a school. Thus, pinpointing students who show low levels of adjustment or higher levels of intentions to leave or transfer out of a school has the potential to help schools design interventions

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targeted at students who are likely to leave, but allowing both schools and students to avoid the costs of transferring or dropping out of college. Additionally, one of the advantages of resilience is, unlike many other individual difference variables, it may be increased through training programs (e.g., Maddi, Kahn, & Maddi, 1998; Maddi, 2007). Thus, by identifying students likely to leave school as well as those low on resilience, the potential success and benefits of interventions may be maximized by targeting a trait that may be cultivated and by helping students before they make a costly choice.

College Fit

The fourth hypothesis proposed that students with higher scores on the objective fit dimensions would show greater levels of affective commitment and adjustment to college and lower levels of transfer intentions and search behaviors. Like the third hypothesis, support was found for this idea through the use of multiple regressions where the dimensions of fit were entered as a block of predictors for each outcome. However, not all of the fit dimensions were equally important in predicting the outcomes of interest as the convenient campus, reputation and campus feel, and financial fit dimensions did not significantly predict any of the dependent variables. Sports predicted only affective commitment, an outcome significantly predicted by five of the fit dimensions. And the activities dimension significantly predicted institutional fit and transfer behaviors and search intentions, which were also outcomes that had several fit dimensions acting as significant predictors.

Several of the fit dimensions were significant predictors of multiple dependent variables, providing support for the fourth hypothesis. The southern city dimension

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predicted affective commitment, search behaviors and transfer intentions, social, and academic adjustment. The student body and social dimension significantly predicted affective commitment, emotional, and institutional adjustment. Both the small school and religion dimensions significantly predicted affective commitment, transfer intentions and search behaviors, social, and institutional adjustment. The findings regarding institutional and emotional adjustment mirror those of conducted to test the previous hypotheses. That is, a number of fit and resilience dimensions significantly predicted institutional adjustment and only one dimension predicted emotional adjustment.

While the original hypotheses proposed that fit dimensions measuring aspects of the college experience similar to the specific facets of adjustment would show the strongest relationships, it was not possible to test these predictions. Because the dimensions illuminated by the current study did not match up exactly with those hypothesized by the literature review, it was not possible to test whether students with higher scores on academic fit showed better academic adjustment to college, for example.

However, the social adjustment and student body and social fit facet appeared to match up like the dimensions proposed in the original hypothesis. However, this dimension of fit did not significantly predict social adjustment. Thus, if that connection had been hypothesized, it would not have been supported. Nonetheless, this finding should be interpreted with caution as this dimension of fit appeared to include items measuring social fit, but more research is needed before it can be clearly determined that this facet assesses the social environment.

Nonetheless, these results are some of the most promising for the study of fit as it relates to college student retention. Previous studies have shown little to no support for fit as a predictor of retention and certainly not above and beyond GPA (e.g., Mattern, Woo, Hossler, & Wyatt, 2010). But the current study shows that the majority of fit dimensions significantly predict one or more retention-related outcomes. Similarly, one or more fit dimensions significantly predict all of these outcomes above and beyond high school and current college GPA. Thus, these results provide reason to be optimistic about fit predicting college student retention and justify further studies investigating how fit may be used to understand and affect retention.

Fit by Year Interactions

The fifth hypothesis predicted that fit would be a better predictor of all of the retention-related outcomes for those in their first and second years of college than for those later on in their college careers. This hypothesis was supported by the analyses demonstrating that year in school moderated the relationship between several types of fit and the outcomes of interest. At least one type of fit significantly interacted with year in school for each of the six outcomes of interest.

Examining the predicted means and interaction plots showed that all of the interactions – except for southern city fit by year predicting emotional adjustment – were in the predicted direction. That is, individuals high in fit who were just starting their college careers showed the greatest levels of commitment and adjustment and the lowest level of search behaviors and transfer intentions. The one exception would be the year by activities fit interaction predicting emotional adjustment in which those starting college

who were low in fit had a mean of 4.23 while those in their later years who had high

levels of fit had a mean of 4.22. This difference is quite small and thus the hypothesis is

still supported.

Additionally, there was a larger difference between the mean adjustment,

commitment, and transfer scores for those low versus high in fit for students in their first

two years of college. That is, the adaptive outcomes increased more when fit was high for

those just starting college compared to those who had been there for more years. This

indicates support for the idea that fit matters more for students just starting college as

those who do not fit well are likely to leave and thus those with poor fit do not remain at

a school for three or four years.

As previously mentioned, the one interaction that did not fit the expected pattern

of interactions was the southern city fit dimension by year interaction predicting

emotional adjustment. In this case, emotional adjustment was highest for those in their

later years when fit was high, followed by those just starting college where fit was low.

This interaction suggests this dimension of fit – including items regarding the presence of

an airport, warm weather and the beach – did not contribute to emotional adjustment of

students just starting college. The results were as expected for those later in their college

careers that showed greater levels of emotional adjustment when fit was high, but it

suggests that this dimension of fit may have unfortunate effects on those just starting

college. However, more work should be conducted to better understand this result and its

potential implications as this type of finding is a departure from existing work showing

the benefits of high levels of fit (e.g., Kristof-Brown, Zimmerman, & Johnson, 2005).

Fit by Resilience Interactions

The last hypothesis proposed that there would be significant interactions between fit and resilience predicting all of the outcomes of interest. Results showed that overall resilience had a significant interaction with at least one fit dimension to predict four of the six outcomes – transfer intentions and search behaviors, emotional, academic, and institutional adjustment. Similarly, small school fit, religious fit, and activities fit all had significant interactions with resilience to predict two separate outcomes. As with the last set of analyses, emotional adjustment had the fewest significant main effects.

The expected means and interaction plots demonstrated that only some of the results demonstrated support for the hypothesis that those high in resilience and fit would show the highest levels of adjustment and lowest levels of search behaviors. While these results suggest only partial support for the interaction proposed by the job demands-resources model (Bakker & Demerouti, 2007), they do not provide significant reason to question the model because this study was an attempt to expand the model to the college setting, an environment that was not the original setting for studies of this theory. Additionally, the current study only examined resilience and fit, a limited set of demands and resources. Many other studies examining the interaction between resources and demands include many more types of both (e.g., Knudsen, Ducharme, & Roman, 2009; Korunka, Kubicek, Schaufeli, & Hoonakker, 2009).

One notable exception to the predicted direction of the hypotheses was the finding that those low in resilience with high levels of activities fit have the highest levels of transfer intentions, above and beyond individuals low in fit and resilience. Additionally,

those low in resilience and high in religion fit have the highest levels of transfer intentions and search behaviors. However, in this case, those high in religious fit and resilience have the lowest levels of transfer intentions and search behaviors. Nonetheless, these results provide additional support for the idea that fit may not always have desirable effects in all situations.

In these cases where fit does not seem to provide a boost to retention-related attitudes and adjustment, it is the individuals who are low in resilience that defy expectations and hypotheses. In these cases, it seems possible that when individuals do not have the individual resources to cope with the challenges and stress of adapting to college, no level of fit will have a positive effect on retention-related attitudes. While further research should be conducted in order to understand when this effect is present, this is an important note in the research literature and underscores the importance of resilience.

Contributions

The current study makes several important contributions to the industrial and organizational psychology and educational psychology literatures. One of the most important ideas here is that the study of fit as a predictor of college student retention should not be abandoned. While previous research (e.g., Mattern, Woo, Hossler, & Wyatt, 2010) has suggested that fit is not a significant predictor of retention, certainly not better than grade point average, the current study demonstrates that fit does predict important student outcomes above and beyond both high school and college GPA.

Among the important differences between previous research and the current study is the use of an expanded measure of fit, composed of nine dimensions of the environment.

Given the variety of aspects of the work environment considered in PE fit in the traditional workplace, it is rather surprising that studies of fit in the college setting, where students may live in that setting rather than spending only about 40 hours each week, have considered only a few dimensions. The current study involved several exploratory factor analyses in order to create nine sub-scores and all of them had some contribution to at least one outcome of interest. While this measure is still new and further investigation is needed in order to completely understand its psychometric properties and potentially to identify additional dimensions, an important lesson is that this measure of fit certainly warrants further investigation and use. This measure also underscores the importance of considering a wide array of factors identified through a wide body of literature – in this case, college student retention as well as college student attraction and selection of schools – rather than utilizing only a few dimensions previously utilized in a small section of research.

The fact that there are any significant fit by year interactions underscores the importance of not only studying those early in their college careers, but also examining fit for newcomers or those new to the college setting. This study also demonstrates the generalizability of Schneider's classic attraction-selection-attrition framework by showing support for this model in college students (Schneider, 1987; 2001; Schneider, Goldstein, & Smith, 1995).

However, the findings regarding the fit by resilience interactions provide evidence of an important new idea. These results demonstrate that unless an individual has the resilience needed to handle the stress of adapting to college, fit is unable to buffer one from these challenges. But, for those who do have high levels of resilience, higher levels of fit sometimes aid in one's adjustment to college. These results provide an important qualifier to fit research that has previously focused on the positive effects of fit and has not considered cases in which it does not buffer one from stress or provide a boost to levels of adaptive outcomes. However, it is worth noting that Mattern, Shaw, and Kobrin (2010) suggested that it would be useful to study whether an individual's choice to challenge one's self in high school might build resiliency that facilitates adaptation to college and its associated stressors.

Another important contribution of the current study was the utilization of a method and measures that avoided issues associated with choosing a narrow conceptualization of fit. The current study utilized objective fit measures and examined multiple aspects of the environment at once, thereby avoiding some of the issues inherent in focusing on only one part of the setting. For example, researchers examining person-organization fit often have to make decisions about complementary versus supplementary fit and supplies-values versus demands-abilities fit. The current study did not have to address these issues. For example, rather than having to focus on whether a student is politically conservative in an environment of liberals and how this might actually enhance the individual's college experience by creating complementary fit, the current study only examined whether a student thought it was important that the college have an

environment with a lot of conservative, liberal, or politically active students. Thus, the current study did not require any distinctions be made between complementary and supplementary fit and selecting one rather than the other did not negatively affect the results.

The current study also addressed a need for more research to better understand the role of personal resources as well as non-work effects on work-related outcomes in the job demands-resources model (Bakker, Brummelhuis, Prins, & van der Heijden, 2011). The current research examined the role of resilience as a personal resource in predicting retention-related outcomes and demonstrated that it does sometimes interact with fit, thus providing evidence for the importance of considering this resource in future work. Additionally, the current research is one of only a few studies that have examined non-work variables using the JD-R framework, a direction of research recommended by Bakker et al. (2011). Although this study uses the college setting, which might be deemed entirely non-work, it might also be conceptualized as a both work and non-work. In this environment, work might refer to academics and school reputation while non-work might reflect student body and social fit as well as recreational activities. In this study, both types of variables were examined to form a more complete understanding of fit. Indeed, this resulted in better prediction of the retention-related outcomes as both types of variables accounted for significant amounts of variance in differing analyses.

Ultimately, the current study followed up on several calls for research including the expansion of the job demands-resources model and application of person-environment fit theory to the college environment. However, there are limitations to the

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current study, many of which suggest directions for future research. Among these suggestions, additional research is recommended to refine some of the measures used in the current research as well as build on this new understanding and emphasis on resilience, specifically meaning making and purpose as it buffers one from the stresses of college life.

Limitations and Future Directions

As with many psychological studies, the findings here might be supported by an extension and attempted replication of the results found in the current study. While this study was able to test dimensions of college fit in three diverse college settings, there are still a variety of other school environments that should be considered. For example, one or more historically black colleges and universities (HBCU) should be evaluated in future studies as well as a school with a majority of non-traditional students. In these environments, it is likely that the nature of the stressors surrounding the college experience may have some important differences that might have an impact on fit and its effects.

Additionally, the current study refines the models of resilience and college fit dimensions at the same time it used these measures to understand important retention outcomes. While this is certainly not uncommon, future studies have the advantage of the findings related to these measures and may allow for the refining of items, adding items to measure facets that were reduced to only a few items due to reliability issues, as was the case with neuroticism and locus of control. Similarly, future research can expand upon the dimensions of fit assessed and build on the items assessing fit dimensions to

tease out the exact nature of those facets. For example, the financial fit dimension only included three items assessing two levels of tuition as well as the cost of living. These items included exact cost specifications, which were necessary to code the items objectively later, but are still obviously limited. Thus, future analyses might be able to better understand the nature and levels of financial burdens that students find acceptable. Similarly, future research might test items that attempt to objectively measure and understand the levels of financial aid students expect.

One important question from the current study concerns the generalizability of these findings. It is true that this research is limited to only three schools and thus future research should certainly consider other diverse environments. In particular, this study should be extended to include schools in different geographic locations such as the northeastern and western regions of the United States as well as to schools with larger nontraditional student populations. Further, schools with students of greater ethnic and socioeconomic diversity might provide interesting insights into the generalizability of the current study's findings. If the results of this study can be extended to these other environments, it obviously provides further justification for the importance of these findings. Nonetheless, it is worth noting that if limited to three schools, those considered in the current research were almost as different as any ideal sample of three. That is, this research examined a mostly male, military school as well as both public and private institutions with a range of tuition costs, different levels of religious affiliation, located in cities and rural environments, and ranging from less than 1,000 to more than 10,000 undergraduate students.

Because these new measures, particularly the assessment of college life dimensions, were only tested in these three populations, it is important to study the measurement equivalence of these items at different schools. Ideally, this would have been tested in the current research, but unfortunately this was not possible. Assessing measurement equivalence would require larger samples from each of the participating institutions. The current research would have been reduced to only about one hundred people at each school and thus this is not a large enough sample to test measurement equivalence and determine whether the factor structure might change at different universities.

The current study also provides evidence that the student-institution fit construct is not a lost cause, in contrast to what some researchers have suggested (e.g., Mattern, Woo, et al., 2010). However, the current research is still only the beginning of understanding how fit works and the specific dimensions of the college environment that have relevant consequences. It is still not understood how fit impacts students and buffers them from the stressors of college. Thus, future research should explore this process and mechanisms as well as the dimensions of fit that have important effects on outcomes of interest.

One important idea for future studies comes from the literature review section of this project, specifically that reviewing the nature of person-group fit. Traditional studies of PG fit have focused on the relationship between an individual and his or her work group or team in terms of knowledge and skills. In these studies, the only types of groups or teams studied are those that share a common goal with tasks to complete together.

However, the current study looks at the importance of social adjustment and how well one relates to others in the environment in a social, interpersonal way. This is a theme that has received much attention in the literature, but it is then labeled social support. Previous research demonstrates the importance of social support in predicting desirable work-related outcomes such as job satisfaction, organizational commitment, and reduced turnover intentions (e.g., Chiaburu & Harrison, 2008; Halbesleben, 2006; Humphrey, Nahrgang, & Morgeson, 2007). However, this theme has been under-utilized in the fit literature. Thus, future research should examine how person-group fit may be conceptualized as socially supportive conditions and how this type of fit facilitates positive work outcomes.

Perhaps the most important contribution from the current study concerns findings underscoring the importance of resilience, particularly meaning making and purpose, and how they benefit both students and universities alike. Limited research has addressed resilience in general college student populations and even less information is available about how meaning making and purpose specifically convey benefits. Thus, one future direction for research should examine the process and mechanisms by which some students gain resiliency and meaning making and how that buffers them from stressors. Additionally, researchers and practitioners should create and examine the effectiveness of interventions and training that may increase resilience for all students.

The costs of dropping out or transferring from college continue to rise for both individuals and universities. As these financial and social costs increase, it becomes increasingly important to understand how to reduce them. The current research points to

an important personal resource or mechanism in resilience and meaning making for doing

just that, and future research should investigate the exact mechanisms by which this

happens as well as practical ways to put this knowledge to use.

APPENDICES

Appendix A

Demographic Measures

1. What is your gender?
   a. Male
   b. Female
2. How old are you? (open-ended)
3. What is your current class status?
   a. 4th class or 1st year
   b. 3rd class or 2nd year
   c. 2nd class or 3rd year
   d. 1st class or 4th year
4. What is your father's highest level of education? Please enter the highest degree you are sure he obtained.
   a. Less than high school
   b. GED/High school proficiency
   c. Some college education without degree
   d. Associate's degree
   e. Bachelor's degree
   f. Some post graduate education without advanced degree
   g. Advanced degree (Masters, Ph.D., J.D., M.D.)
5. What is your mother's highest level of education? Please enter the highest degree you are sure she obtained.
   a. Less than high school
   b. GED/High school proficiency
   c. Some college education without degree
   d. Associate's degree
   e. Bachelor's degree
   f. Some post graduate education without advanced degree
   g. Advanced degree (Masters, Ph.D., J.D., M.D.)
6. How many other people in your family attended your school? (Note that for each school, the actual school name was used rather than "your school.")
   a. None
   b. One
   c. Two
   d. Three or More
7. How would you describe your household financial situation as a child?
   a. Very poor, my family struggled to get by each month
   b. Poor, my family often had trouble making ends meet
   c. Average, about the same as most people
   d. Above average, my family did well, but we were not rich
   e. Very wealthy, my family had more money than most people

8. Please estimate your current overall grade point average (GPA), not including any classes you are currently taking.
    a. 1.50 or lower
    b. 1.51 – 1.75
    c. 1.76 – 1.99
    d. 2.00 – 2.25
    e. 2.26 – 2.50
    f. 2.51 – 2.75
    g. 2.76 – 2.99
    h. 3.00 – 3.25
    i. 3.26 – 3.50
    j. 3.51 – 3.75
    k. 3.76 – 4.00
9. What was your approximate overall grade point average (GPA) in high school?
    a. 1.50 or lower
    b. 1.51 – 1.75
    c. 1.76 – 1.99
    d. 2.00 – 2.25
    e. 2.26 – 2.50
    f. 2.51 – 2.75
    g. 2.76 – 2.99
    h. 3.00 – 3.25
    i. 3.26 – 3.50
    j. 3.51 – 3.75
    k. 3.76 – 4.00
10. If you took the SAT in high school, please estimate your score for the most recent time you took the test.
    a. Math
        i. 200 – 290
        ii. 300 – 390
        iii. 400 – 490
        iv. 500 – 590
        v. 600 – 690
        vi. 700 – 800
        vii. NA
    b. Critical Reading (Verbal)
        i. 200 – 290
        ii. 300 – 390
        iii. 400 – 490
        iv. 500 – 590
        v. 600 – 690
        vi. 700 – 800
        vii. NA
    c. Writing

       i.   200 – 290
      ii.   300 – 390
    iii.   400 – 490
    iv.   500 – 590
     v.   600 – 690
    vi.   700 – 800
   vii.   NA/There was no writing section when I took the test.

11. If you took the ACT in high school, please estimate your score for the most recent time you took the text.
    a.   11 – 18
    b.   19 – 21
    c.   22 – 24
    d.   25 – 27
    e.   28 – 36
    f.   NA

Appendix B

Dispositional Resilience Measures

Commitment (Hardiness)
1. Most days, my life is really interesting. *
2. Most of my life gets spent doing things that are worthwhile. *
3. I enjoy most things in my life. *
4. I really look forward to the tasks I have to do each day. *
5. I have a clear sense of purpose in my life. **
6. I can easily find meaning in my daily life. **

*Items from Sinclair & Oliver (2004)
**Items created for the current study.

Challenge (Hardiness)
1. I wake up eager to take up my life wherever it left off. *
2. I take a head-on approach to facing problems in my life. *
3. I see stressful events as opportunities to learn and grow. *
4. I'm always seeking new challenges to overcome. *
5. I constantly seek new ways to grow as a person. **
6. I enjoy learning from my mistakes. **

*Items from Sinclair & Oliver (2004)
**Items created for the current study.

Control (Hardiness, Core Self-Evaluations)
1. My successes are usually because of my effort and stability. *
2. My successes are related to the choices I make. *
3. Sometimes I do not feel in control of my work. **
4. I determine what will happen in my life. **
5. I do not feel in control of my successes at school. (R) **
6. I can solve most of my problems on my own. *
7. I feel confident that I can handle just about any challenge. *

* Items from Judge, Erez, Bono, & Thoresen (2003)
** Items from Goldberg (1999)

Emotional Stability (Core Self-Evaluations) – Judge, Erez, Bono, & Thoresen (2003)
1. Sometimes I feel depressed. (R) (CSES)
2. I am capable of coping with most of my problems. (CSES)

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3. There are times when things look pretty bleak and hopeless to me. (R) (CSES)

Self-Efficacy or Confidence (Core Self-Evaluations, Positive Psychological Capital)
1. I believe I can succeed at most any endeavor to which I set my mind. *
2. I will be able to successfully overcome many challenges. *
3. When I try, I generally succeed. **
4. I complete tasks successfully. **
5. I am filled with doubts about my competence. ** (R)
6. I am confident I get the success I deserve in life. **
7. Sometimes when I fail I feel worthless. ** (R)
8. Overall, I am satisfied with myself. **
9. I am a very self-confident person. ***

*Items from Chen, Gully, and Eden (2004)
**Items from Judge et al. (2003)
***Items developed for the current study.

Self-Esteem (Core Self-Evaluations) – Rosenberg (1989)
1. I take a positive attitude toward myself.
2. On the whole I am satisfied with myself.

Optimism (Positive Psychological Capital) – Goldberg (1999)
1. I don't expect things to go wrong for me.
2. I am always optimistic about my future.
3. I hardly ever expect things to go my way. (R)
4. I count on good things happening to me.
5. I expect more good things to happen to me than bad.

Hope (Positive Psychological Capital) – Snyder, Sympson, Ybasco, Borders, Babyak, & Higgins (1996)
1. If I should find myself in a jam, I could think of many ways to get out of it.
2. I am energetically pursuing my goals.
3. There are lots of ways around any problem that I am facing now.
4. Right now, I see myself as being pretty successful.
5. I can think of many ways to reach my current goals.
6. At this time, I am meeting the goals that I have set for myself.

Appendix C

Objective Fit Measure

	The Citadel	Clemson University	Montreat College
1. Traditional feeling	+1	+1	+1
2. Modern feeling	-1	-1	-1
3. Large student body*	-1	+1	-1
4. Small student body	+1	-1	+1
5. Military presence	+1	+1	-1
6. Low tuition	-1	-1	-1
7. Higher tuition	+1	+1	-1
8. Low cost of living	+1	+1	-1
9. Campus boundaries	+1	+1	+1
10. Big city	+1	-1	+1
11. Small town	-1	+1	-1
12. Live in walking distance	+1	+1	+1
13. Live on campus	+1	+1	+1
14. Walk to classes	+1	+1	+1
15. Traditional students	+1	+1	+1
16. Small classes	+1	+1	+1
17. Research with faculty	-1	+1	-1
18. Ranking	-1	+1	-1
19. Warm weather	+1	+1	+1
20. Beaches, the coast	+1	-1	-1
21. Near airport	+1	-1	+1
22. Public transportation	+1	+1	+1
23. Fitness facilities	+1	+1	-1
24. Ethnic diversity	-1	-1	+1
25. Mostly males	+1	-1	-1
26. Mostly females	-1	-1	-1
27. International diversity	-1	-1	NA*
28. Clubs	-1	+1	-1
29. Political activism	+1	+1	NA*
30. Religious group	+1	+1	+1
31. Religious affiliation	-1	-1	+1
32. Off campus recreation	+1	+1	+1
33. Off campus social	+1	+1	+1
34. Winter activities	-1	-1	+1
35. Summer activities	+1	+1	+1
36. Difficult admission	-1	+1	-1
37. Easy admission	-1	-1	+1
38. Varsity sports	+1	+1	-1

39. Football team	+1	+1	-1
40. Support for athletics	+1	+1	+1
41. Greek life	-1	+1	-1
42. Professors teaching	+1	+1	+1
43. Alumni network	+1	+1	+1

* indicates items for which there was not enough data to code these items for the third school. However, these items were not ultimately used to determine fit.

Appendix D

Outcome Measures

Student Adaptation to College Questionnaire (SACQ) – Baker & Siryk (1984)

Social Adjustment
1. I am meeting as many people, and making as many friends as I would like at college.
2. I have several close social ties at college.
3. I feel that I have enough social skills to get along well in the college setting.
4. I am satisfied with the extent to which I am participating in social activities at college.
5. I feel that I fit in well as part of the college environment.

Emotional Adjustment
1. Lately, I have been feeling blue and moody. (R)
2. I haven't been able to control my emotions very well lately. (R)
3. I have been getting angry too easily lately. (R)
4. I have been feeling tense or nervous lately. (R)
5. Sometimes my thinking gets muddled up too easily. (R)

Academic Adjustment
1. I am enjoying my academic work at college.
2. I'm quite satisfied with my academic situation at college.
3. I'm not working as hard as I should at my course work. (R)
4. I am enjoying my academic work at college.
5. I am satisfied with the level at which I am performing academically.

Institutional Adjustment
1. I find myself giving considerable thought to taking time off from college and finishing later. (R)
2. I wish I were at another college or university. (R)
3. Getting a college degree is very important for me.
4. Lately I have been giving a lot of thought to transferring to another college. (R)
5. Lately I have been giving a lot of thought to dropping out of college altogether and for good. (R)

Affective Commitment
1. I feel a strong sense of "belonging" to my school.
2. I feel "emotionally attached to my school.
3. I feel like "part of the family" at my school.
4. This school has a great deal of personal meaning for me.

Intentions to Leave and/or Transfer

Intentions to Leave – Hom, Griffeth, & Sellaro (1984)
1. I am planning to search for a new school outside of my current school during the next 12 months.
2. I often think about leaving this school.
3. If I have my own way, I will be getting my education from another school one year from now.

Search Behaviors and Transfer Intentions – Kopelman, Rovenpor, and Millsap (1992)
1. Thought about applying for admission to a new school.
2. Looked for a new school online.
3. Talked to students at another school about enrolling there.
4. Applied for admission to a new school.
5. Talking to faculty or staff at another school about enrolling there.

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TABLES

Table 1. Holland's Personality Typology (Adapted from Holland, 1996)

	Personality Type					
	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Preferred Activities and Occupations	Manipulation of machines, tools, things	Exploration, understanding and prediction of natural and social phenomena	Literary, musical, or artistic activities	Helping, teaching, treating counseling, or serving others via personal interaction	Persuading or directing others	Establishing or maintaining routines, standards
Values	Material rewards for tangible accomplishments	Development or acquisition of knowledge	Creative expressions of ideas, emotions, sentiments	Fostering welfare of others, social service	Material accomplishments, social status	Material or financial accomplishment, power
Sees Self As	Practical, conservative, with manual and mechanical skills and lacking social skills	Analytical, intelligent, skeptical, having academic talent and lacking interpersonal skills	Open to experiences, innovative, intellectual and lacking clerical or office skills	Empathic, patient, interpersonally skilled and lacking mechanical ability	Having sales, persuasive skills and lacking scientific ability	Having technical skills in business or productive and lacking artistic skills
Others See As	Normal, frank	Asocial, intellectual	Unconventional, disorderly, creative	Nurturing, agreeable, extraverted	Energetic, gregarious	Careful, conforming
Avoids	Interaction with other people	Persuasion or sales activities	Routines and conformity	Mechanical and technical activity	Scientific, intellectual topics	Ambiguous or unstructured tasks

Table 2. Comparison of School Environments

	The Citadel	Clemson University	Montreat College
Location	Charleston, SC	Clemson, SC	Montreat/Asheville, NC
Public or Private	Public	Public	Private (Non-Profit)
Religious Affiliation	None	None	Christian (Non-denominational)
Undergraduate Population	2,477	12,140	850
Total Enrollment (With Graduate Students)	2,477	15,836	959
Admission Acceptance Rate	77%	64%	50%
In-State Tuition & Fees	$10,216	$12,304	$23,164
Out-of-State Tuition & Fees	$27,033	$28,462	$23,165
Percent Male (Female)	93% (7% female)	54% (46% female)	55% (45% female)
Student-to-Faculty Ratio	13:1	16:1	10:1
Percent Out of State	46%	29%	20%
Percent Caucasian	57.41%*	84.11%	70.49%
Number of Foreign Countries Represented (% International)	12 (0.93%)	84 (1.09%)	12 (1.98%)
Athletic Division	1 (AA)	1 (A)	4
Registered Student Organizations	100	292	11

All information contained here is from The Princeton Review (2012) and/or CollegeBoard (2012).

*The Citadel received a score of -1 on a measure of ethnic diversity because although the percent of students listed as Caucasian is 57.41%, other ethnicities together only account for 11.67% (Princeton Review).

Table 3. Characteristics of the Sample

	Entire Sample	The Citadel	Clemson University	Montreat College
	Total Count/Percent	*Total Count/Percent*	*Total Count/Percent*	*Total Count/Percent*
Gender (% Women)	325 (49.5%)	115 (13.9%)	110 (69.1%)	99 (69.7%)
Year in School				
4th Class or 1st Year	90 (12.7%)	43 (20.4%)	14 (9.7%)	33 (27.5%)
3rd Class or 2nd Year	71 (10.1%)	34 (16.1%)	18 (12.5%)	18 (15.0%)
2nd Class or 3rd Year	74 (10.5%)	21 (10.0%)	23 (16.0%)	30 (25.0%)
1st Class or 4th Year	91 (12.9%)	18 (8.5%)	55 (38.2%)	18 (15.0%)
Father's Education (% Bachelor's or Higher)	326 (56.1%)	115 (55.7%)	111 (64.8%)	99 (46.4%)
Mother's Education (% Bachelor's or Higher)	325 (55.3%)	115 (54.7%)	110 (58.1%)	99 (52.6%)
Legacy (% 1 or More Family Members)	326 (26.1%)	116 (30.1%)	110 (28.1%)	99 (18.2%)
Family Financial (% Average or Better)	325 (86.5%)	96 (87.0%)	110 (94.6%)	99 (77.7%)
High School GPA (% 3.00 or Better)	326 (88.3%)	116 (82.8%)	110 (96.3%)	99 (85.9%)
Current GPA (% 3.00 or Better)	326 (68.4%)	116 (52.6%)	144 (72.7%)	99 (82.9%)
SAT Math (% 600 or Higher)	242 (46.3%)	90 (41.1%)	95 (60.0%)	56 (32.2%)
SAT Verbal (% 600 or Higher)	233 (42.0%)	83 (31.3%)	89 (57.3%)	60 (35.0%)
SAT Writing (% 600 or Higher)	251 (35.9%)	90 (26.7%)	94 (47.9%)	66 (31.8%)
ACT Score (% 24 or Higher)	301 (30.9%)	107 (22.4%)	105 (54.3%)	88 (13.6%)

Table 4. Means, Standard Deviations, Cronbach's Alpha, and Correlations Between Study Variables

	M	SD	1	2	3	4	5	6	7	8
1. School	1.81	.81	-							
2. Gender	1.50	.50	.46**	-						
3. Year	2.51	1.17	.09	.16**	-					
4. Father Ed.	4.45	1.78	-.09	-.15**	.09	-				
5. Mother Ed.	4.43	1.69	-.07	-.14*	.16**	.51**	-			
6. Legacy	1.42	.82	.12*	.01	-.01	.12*	.07	-		
7. Financial	3.33	.84	-.17**	-.08	.08	.37**	.29**	.14*	-	
8. HS GPA	8.32	2.32	.10	.21**	.16**	.05	.08	.02	.17**	-
9. College GPA	9.56	1.80	.30**	.23**	.08	.16**	.11	.03	.09	.34**
10. SAT Math	4.36	1.34	.02	-.04	.10	.01	-.00	-.03	.09	.24**
11. SAT Verbal	4.36	1.23	.05	.16*	.09	.07	.02	.09	-.05	.12
12. SAT Writing	4.45	1.56	-.06	.08	.10	.06	.02	.07	.03	.10
13. ACT	4.60	1.48	.11	-.01	-.11*	.02	-.02	-.16**	-.05	-.08
14. SACQemo.	4.34	1.64	.01	.04	.05	.03	.12*	-.03	.00	.00
15. SACQsoc.	5.39	1.14	.18**	.13*	.03	.12*	.00	-.02	.02	.18**
16. SACQaca.	5.00	1.24	.20**	.16**	.02	.04	-.01	.06	.14*	.32**
17. SACQinst.	5.64	1.53	.16**	.23**	.06	-.01	-.02	-.03	-.02	.17**
18. Aff. Comm.	5.26	1.62	.09	.13*	.01	.04	-.06	.07	.04	.21**
19. Intent, Search	2.05	1.41	.11*	-.07	.11*	.03	.03	-.06	.03	-.10

**p < .01 (2-tailed)
*p < .05 (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	M	SD	1	2	3	4	5	6	7	8
20. Resourcefulness	5.45	.99	.05	.11	.07	.03	-.02	-.01	.13*	.24**
21. Purpose	5.20	1.16	.12*	.15**	-.05	.07	.01	-.01	.14*	.21**
22. Optimism	4.73	1.10	-.09	.02	.04	.06	.01	.04	.20**	.10
23. Control	5.50	1.03	-.01	-.03	.10	.08	.07	.03	.17**	.26**
24. Challenge	5.23	1.13	-.02	-.10	-.04	.02	.05	.00	.06	.10
25. Neuroticism	3.98	1.54	.01	-.03	.02	-.06	-.00	.01	-.12*	.05
26. Resilience Avg.	5.01	.75	.01	.05	.04	.03	.03	.01	.13*	.22**
27. Fit Co.	1.60	1.24	.22**	.13*	.12*	-.03	.01	-.13*	-.04	.14*
28. Fit Sp.	.79	1.34	-.13*	.09	.23**	.15**	.11	.08	.30**	.22**
29. Fit Re.	.65	.82	-.01	.23**	.22**	.09	.05	.08	.24**	.14*
30. Fit So.	.54	.83	-.26**	-.08	-.12*	-.01	-.01	.01	.11*	.01
31. Fit St.	-.25	1.02	.30**	.09	.13*	.04	.08	.11*	.01	.02
32. Fit Fi.	-.06	1.21	-.53**	-.14**	.11	.15**	.07	.12*	.21**	.13*
33. Fit Sm.	1.19	1.00	.26**	.21**	.02	.01	.04	-.13*	-.10	.11
34. Fit Re.	.63	.95	.52**	.24**	.04	-.11	-.03	-.14**	-.25**	.01
35. Fit Ac.	.74	.87	.30**	.16**	.18**	.02	.05	-.09	.07	.07

**p < .01 (2-tailed)
*p < .05 (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	9	10	11	12	13	14	15	16	17
1. School									
2. Gender									
3. Year									
4. Father Ed.									
5. Mother Ed.									
6. Legacy									
7. Financial									
8. HS GPA									
9. College GPA	-								
10. SAT Math	.27**	-							
11. SAT Verbal	.27**	.42**	-						
12. SAT Writing	.10	.36**	.50**	-					
13. ACT	.10	.11	.22**	.05	-				
14. SACQemo.	.08	.06	.11	-.01	.05	(.90)			
15. SACQsoc.	.07	-.03	.08	.07	.02	.10	(.85)		
16. SACQaca.	.45**	.19**	.08	.06	.07	.13*	.45**	(.86)	
17. SACQinst.	.26**	.04	.14*	.08	.02	.46**	.25**	.24**	(.87)
18. Aff. Comm.	.13*	-.02	.09	.06	-.05	.11*	.58**	.35**	.44**
19. Intent, Search	-.11	.03	-.11	-.03	.04	-.27**	-.28**	-.18**	-.71**

**$p < .01$ (2-tailed)
*$p < .05$ (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	9	10	11	12	13	14	15	16	17
20. Resourcefulness	.07	.07	.11	.20**	.01	.20**	.45**	.45**	.25**
21. Purpose	.09	.00	.07	.15*	-.03	.18**	.56**	.52**	.29**
22. Optimism	-.05	.05	.06	.15*	-.09	.13*	.29**	.27**	.08
23. Control	.04	.08	.12	.13*	.06	.09	.35**	.42**	.13*
24. Challenge	-.03	.02	.07	.16*	.01	.12*	.46**	.42**	.17**
25. Neuroticism	-.14*	-.07	-.03	-.06	-.03	-.53**	-.10	-.10	-.29**
26. Resilience Avg.	-.03	.02	.08	.16*	-.04	-.01	.47**	.46**	.11*
27. Fit Co.	.06	.01	.05	-.06	.09	-.01	.34**	.23**	.18**
28. Fit Sp.	.04	.07	.03	.07	-.06	.01	.15**	.10	.12*
29. Fit Re.	-.01	.21**	.14*	.16*	-.01	.07	.19**	.10	.16**
30. Fit So.	-.13*	-.15*	-.07	-.04	-.10	-.09	.26**	.14*	.01
31. Fit St.	.21**	.16*	.19**	.09	.01	.17**	-.06	.02	.18**
32. Fit Fi.	-.16**	.13	.05	.15*	-.05	.02	-.04	-.06	-.00
33. Fit Sm.	.13*	.02	.19**	.06	.22**	.13*	.31**	.21**	.29**
34. Fit Re.	.17**	.03	.07	-.13*	.10	.07	.25**	.13*	.16**
35. Fit Ac.	.10	.11	.06	-.01	.06	-.03	.22**	.20**	.02

**p < .01 (2-tailed)
*p < .05 (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	18	19	20	21	22	23	24	25	26
1. School									
2. Gender									
3. Year									
4. Father Ed.									
5. Mother Ed.									
6. Legacy									
7. Financial									
8. HS GPA									
9. College GPA									
10. SAT Math									
11. SAT Verbal									
12. SAT Writing									
13. ACT									
14. SACQemo.									
15. SACQsoc.									
16. SACQaca.									
17. SACQinst.									
18. Aff. Comm.	(.94)								
19. Intent, Search	-.54**	(.96)							

**$p < .01$ (2-tailed)
*$p < .05$ (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	18	19	20	21	22	23	24	25	26
20. Resourcefulness	.28**	-.12*	(.96)						
21. Purpose	.42**	-.26**	.71**	(.93)					
22. Optimism	.16**	-.03	.67**	.53**	(.76)				
23. Control	.26**	-.06	.70**	.56**	.45**	(.90)			
24. Challenge	.30**	-.17**	.70**	.74**	.50**	.60**	(.86)		
25. Neuroticism	-.13*	.12*	-.17**	-.20**	-.10	-.04	-.10	(.76)	
26. Resilience Avg.	.30**	-.11*	.84**	.78**	.72**	.76**	.81**	.20**	(.72)
27. Fit Co.	.28**	-.07	.32**	.27**	.16**	.34**	.27**	.08	.35**
28. Fit Sp.	.24**	-.14**	.32**	.28**	.23**	.27**	.21**	-.03	.30**
29. Fit Re.	.19**	-.09	.34**	.26**	.23**	.29**	.20**	-.09	.28**
30. Fit So.	.20**	-.09	.30**	.28**	.30**	.32**	.28**	.07	.38**
31. Fit St.	.02	-.03	-.15**	-.04	-.18**	-.14*	-.17**	-.15**	-.21**
32. Fit Fi.	.05	-.10	.18**	.06	.21**	.18**	.09	-.04	.15**
33. Fit Sm.	.32**	-.26**	.22**	.22**	.05	.16**	.18**	-.09	.17**
34. Fit Re.	.19**	-.09	.02	.11	-.09	-.06	.05	-.02	.01
35. Fit Ac.	.17**	.06	.23**	.19**	.14*	.26**	.19**	.05	.26**

**$p < .01$ (2-tailed)
*$p < .05$ (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Table 4. (continued)

	27	28	29	30	31	32	33	34	35
20. Resourcefulness									
21. Purpose									
22. Optimism									
23. Control									
24. Challenge									
25. Neuroticism									
26. Resilience Avg.									
27. Fit Co.	(.87)								
28. Fit Sp.	.26**	(.92)							
29. Fit Re.	.23**	.48**	(.77)						
30. Fit So.	.37**	.27**	.09	(.77)					
31. Fit St.	-.25**	-.15**	.03	-.50**	(.83)				
32. Fit Fi.	-.07	.32**	.28**	.13*	-.18**	(.86)			
33. Fit Sm.	.40**	.15**	.16**	.09	.00	-.07	(.63)		
34. Fit Re.	.24**	-.17**	-.06	-.03	.06	-.43**	.29**	(.83)	
35. Fit Ac.	.33*	.13*	.26**	.18**	-.02	-.20**	.13*	.33**	(.78)

**$p < .01$ (2-tailed)
*$p < .05$ (2-tailed)

Note Table 4 continues on pp. 193 – 199. Numbers listed in parentheses on the diagonal refer to the reliability of the scale. NA indicates a one-item measure for which reliability cannot be computed.

Fit Co. refers to the convenient campus dimension of fit, Fit Sp. to sports, Fit Re. to reputation and campus feel, Fit So. to southern city, Fit. St. to student body and social, Fit Fi. to financial, Fit Sm. to small school, Fit Re. to religion, and Fit Ac. to activities.

Table 5. Pattern Matrix for College Fit Dimensions Exploratory Factor Analysis

	Factor									
	1	2	3	4	5	6	7	8	9	10
Item 12: Live in walking distance	.76									
Item 13: Live on campus	.97									
Item 14: Walk to classes	.99									
Item 15: Traditional students*	.56									
Item 38: Varsity sports		1.03								
Item 39: Football team		.73								
Item 40: Support for athletics		.98								
Item 1: Traditional feeling			.63							
Item 9: Campus boundaries			.47							
Item 17: Research with faculty*			.40							
Item 18: Ranking			.49							
Item 29: Political activism*			.50							
Item 36: Difficult admission			.85							
Item 43: Alumni network			.40							
Item 5: Military presence				.62						
Item 10: Big city				.60						
Item 19: Warm weather				.51						
Item 20: Beaches, the coast				.92						
Item 21: Near airport				.67						
Item 22: Public transportation				.44	.32					
Item 24: Ethnic diversity					.96					

* indicates that the item was dropped from the final calculation of subscale scores. Note that loadings listed here are for an analysis that included these items and thus some loadings changed when these items were dropped, but changes were minimal and did not affect factor structure which is why these loadings are displayed here.

Note: Factor loadings below .32 are omitted from this table and Table 5 continues from pp. 200 – 201.

Table 5. (continued)

	Factor									
	1	2	3	4	5	6	7	8	9	10
Item 27: International diversity					.89					
Item 28: Clubs					.48					
Item 6: Low tuition						.87				
Item 7: Higher tuition						.73				
Item 8: Low cost of living						.95				
Item 3: Large student body							.69			
Item 4: Small student body							-.87			
Item 16: Small classes							-.43			
Item 30: Religious group								.78		
Item 31: Religious affiliation								.93		
Item 33: Off campus social									.42	
Item 34: Winter activities									.79	
Item 35: Summer activities									1.00	
Item 26: Mostly females*										.52

* indicates that the item was dropped from the final calculation of subscale scores. Note that loadings listed here are for an analysis that included these items and thus some loadings changed when these items were dropped, but changes were minimal and did not affect factor structure which is why these loadings are displayed here.

Note: Factor loadings below .32 are omitted from this table and Table 5 continues from pp. 200 – 201.

Table 6. Final Fit Dimensions

Factor #	Content Name	Items Included	N	Scale Mean (M)	Scale Standard Deviation (SD)	Cronbach's Alpha (α)
1	Convenient Campus	Item 12: Live in walking distance Item 13: Live on campus Item 14: Walk to classes	3	1.61	1.24	.87
2	Sports	Item 38: Varsity sports Item 39: Football team Item 40: Support for athletics	3	.79	1.34	.92
3	Reputation and Campus Feel	Item 1: Traditional feeling Item 9: Campus boundaries Item 18: Ranking Item 36: Difficult admission Item 43: Alumni network	5	.64	.82	.77
4	Southern City	Item 5: Military presence Item 10: Big city Item 19: Warm weather Item 20: Beaches, the coast Item 21: Near airport Item 22: Public transportation	6	.54	.83	.77
5	Student Body and Social	Item 24: Ethnic diversity Item 27: International diversity Item 28: Clubs	3	-.26	1.02	.83

* indicates this item was reverse-scored. Note Table 6 continues pp. 202 – 203.

Table 6. (continued)

Factor #	Content Name	Items Included	N	Scale Mean (M)	Scale Standard Deviation (SD)	Cronbach's Alpha (α)
6	Financial	Item 6: Low tuition Item 7: Higher tuition Item 8: Low cost of living	3	-.06	1.21	.86
7	Small School	Item 3: Large student body* Item 4: Small student body Item 16: Small classes	3	1.19	1.00	.63
8	Religion	Item 30: Religious group Item 31: Religious affiliation	2	.63	.95	.83
9	Activities	Item 33: Off campus social Item 34: Winter activities Item 35: Summer activities	3	.74	.87	.78

* indicates this item was reverse-scored. Note Table 6 continues pp. 202 – 203.

Table 7. Pattern Matrix for Dimensions of Resilience Exploratory Factor Analysis

	Factor						
	1	2	3	4	5	6	7
Efficacy 1: When I try, I generally succeed.	1.13						
Efficacy 2: I complete tasks successfully.	1.16						
Efficacy 4: I am confident I get the success I deserve in life.	.41						
Efficacy 6: Overall, I am satisfied with myself.	.48						
Efficacy 8: I believe I can succeed at most any endeavor to which I set my mind.	.68						
Efficacy 9: I will be able to successfully overcome many challenges.	.63						
Hope 1: If I should find myself in a jam, I could think of many ways to get out of it.	.65						
Hope 2: I am energetically pursuing my goals.	.63						
Hope 3: There are lots of ways around any problems that I am facing now.	.63				.42		
Hope 4: Right now, I see myself as being pretty successful.	.70						
Hope 5: I can think of many ways to reach my current goals.	.59						
Hope 6: At this time, I am meeting the goals that I have set for myself.	.41	.34					
Esteem 1: I take a positive attitude toward myself.	.34		.44				
Esteem 2: On the whole, I am satisfied with myself.	.38		.35				

* indicates a reverse scored item.

Note that loadings below .32 are omitted from this table. Note that Table 7 continues from pp. 204 – 206.

Table 7. (continued)

				Factor			
	1	2	3	4	5	6	7
Commitment 1: Most days, my life is really interesting.		.93					
Commitment 2: Most of my life gets spent doing things that are worthwhile.		.98					
Commitment 3: I enjoy most things in my life.	.37	.54					
Commitment 4: I really look forward to the tasks I have to do each day.		.79					
Commitment 5: I have a clear sense of purpose in my life.		.73					
Commitment 6: I can easily find meaning in my daily life.		.86					
Challenge 1: I wake up eager to take up my life wherever it left off.		.73					
Challenge 2: I take a head-on approach to facing problems in my life.		.50			.32		
Optimism 1: I don't expect things to go wrong for me.			.74				
Optimism 2: I am always optimistic about my future.			.52				

* indicates a reverse scored item.

Note that loadings below .32 are omitted from this table. Note Table 7 continues from pp. 204 – 206.

Table 7. (continued)

	Factor						
	1	2	3	4	5	6	7
Optimism 4: I count on good things happening to me.			.85				
Optimism 5: I expect more good things to happen to me than bad.			.75				
Control 1: My successes are usually because of my effort and ability.				.50			.73
Control 2: My successes are related to the choices I make.				.47			.70
Control 4: I determine what will happen in my life.				.73			
Control 6: I can solve most of my problems on my own.				.83			
Control 7: I feel confident that I can handle just about any challenge.				.37			
Challenge 3: I see stressful events as opportunities to learn and grow.					.76		
Challenge 4: I'm always seeking new challenges to overcome.					.60		
Challenge 5: I constantly seek new ways to grow as a person.					.69		
Challenge 6: I enjoy learning from my mistakes.					.77		
Neuroticism 1: Sometimes I feel depressed.*						-.96	
Neuroticism 3: There are times when things look pretty bleak and hopeless to me. *						-.86	

* indicates a reverse scored item.

Note that loadings below .32 are omitted from this table. Note Table 7 continues from pp. 204 – 206.

Table 8. Confirmatory Factor Analyses for Resilience Models

Model	X^2 (df)	S-B X^2	CFI	NFI	SRMR	RMSEA
1. One First Order Factor	3932.83 (703)	2721.78	.65	.61	.09	.12
• One First Order Factor – Several Error Covariances	2473.39 (623)	1763.56	.80	.75	.09	.10
2. Eight First Order Factors	1835.22 (751)	1550.32	.83	.75	.07	.06
• Eight First Order Factors – Several Error Covariances	1722.98 (608)	1250.15	.88	.82	.09	.08
3. One Third Order Factor, Control and Efficacy Cross-Loading	2600.61 (689)	1371.42	.79	.74	.09	.10
• One Third Order Factor, Control and Efficacy Cross-Loading – Several Error Covariances	1930.68 (682)	1704.94	.87	.81	.10	.10
4. EFA-Based Six First Order Factors	2384.87 (620)	1525.33	.80	.75	.08	.10
• EFA-Based Six First Order Factors – Several Error Covariances	1955.86 (617)	1415.66	.85	.80	.10	.09
5. EFA-Based Six First Order Factors and One Second Order Factor Model	2449.10 (622)	1748.08	.80	.74	.08	.10
• EFA-Based Six First Order Factors and One Second Order Factor Model – Several Error Covariances	1910.85 (618)	1378.93	.86	.80	.07	.08

Note: S-B X^2 refers to the Satorra-Bentler scaled statistic which has been corrected for non-normality in large samples and has been shown to more closely approximate X^2 in large samples than the uncorrected estimates (Byrne, 2008; Chou, Bentler, & Satorra, 1991; Hu, Bentler, & Kano, 1992).

Table 9. Final Resilience Dimensions

Factor #	Factor Name	Items Included	N	Scale Mean (M)	Scale Standard Deviation (SD)	Cronbach's Alpha (α)
1	Resourceful	Efficacy 1	14	76.10	13.88	.96
		Efficacy 2				
		Efficacy 4				
		Efficacy 6				
		Efficacy 8				
		Efficacy 9				
		Hope 1				
		Hope 2				
		Hope 3				
		Hope 4				
		Hope 5				
		Hope 6				
		Esteem 1				
		Esteem 2				
2	Purpose	Commitment 1	8	41.50	9.25	.93
		Commitment 2				
		Commitment 3				
		Commitment 4				
		Commitment 5				
		Commitment 6				
		Challenge 1				
		Challenge 2				

Note that Table 9 continues pp. 208 – 209.

Table 9. (continued)

Factor #	Factor Name	Items Included	N	Scale Mean (M)	Scale Standard Deviation (SD)	Cronbach's Alpha (α)
3	Optimism	Optimism 1 Optimism 2 Optimism 4 Optimism 5	4	18.87	4.40	.76
4	Control	Control 1 Control 2 Control 4 Control 6 Control 7	5	27.53	5.14	.90
5	Challenge	Challenge 3 Challenge 4 Challenge 5 Challenge 6	4	20.95	4.43	.86
6	Neuroticism	Neuroticism 1* Neuroticism 3*	2	7.97	3.08	.76

* indicates a reverse-scored item

Note that Table 9 continues pp. 208 – 209.

Table 10a. Regression Results for Resilience Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.12*			-.05		
College GPA	.04			-.05		
Step 2: Resilience		.20**	.16**		.10**	.08**
Resourcefulness	-.06			.04		
Purpose	.41**			-.33**		
Optimism	-.07			.12		
Control	.05			.09		
Challenge	.03			-.05		
Neuroticism	-.06			.07		

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Table 10b. Regression Results for Resilience Predicting Emotional and Social Adaptation to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.01			.07		
College GPA	.00			.00		
Step 2: Resilience		.30**	.29**		.32**	.29**
Resourcefulness	.16			.10		
Purpose	.01			.44**		
Optimism	-.01			-.05		
Control	-.02			-.02		
Challenge	-.04			.10		
Neuroticism	-.51**			.01		

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Table 10c. Regression Results for Resilience Predicting Academic and Institutional Adaptation to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.07			.06		
College GPA	.41**			.17		
Step 2: Resilience		.47**	.23**		.20**	.13**
Resourcefulness	.03			.21*		
Purpose	.30**			.24**		
Optimism	.00			-.14*		
Control	.14*			-.08		
Challenge	.10			-.06		
Neuroticism	.03			-.21**		

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Table 11. Summary of Regression Results for Resilience Dimensions as Predictors

	Affective Commitment	Transfer and Search	SACQ emotional	SACQ social	SACQ academic	SACQ institutional
Resilience R^2						
Resilience ΔR^2						
Resourcefulness β						
Purpose β						
Optimism β						
Control β						
Challenge β						
Neuroticism β						

ᵢ indicates that the results are significant at the $p < .05$ level, ᵢ indicates that the results are significant at the $p < .01$ level.

Table 12a. Regression Results for Fit Dimensions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.12*			-.02		
College GPA	.03			-.08		
Step 2: Fit		.23**	.18**		.13**	.11**
Convenient Campus	.07			.06		
Sports	.13*			-.09		
Reputation & Campus Feel	.02			-.02		
Southern City	.19**			-.14*		
Student Body & Social	.15*			-.09		
Financial	.09			-.11		
Small School	.19**			-.23**		
Religion	.17**			-.14*		
Activities	.02			.15*		

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

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Table 12b. Regression Results for Fit Dimensions Predicting Emotional and Social Adaptation to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.05			.14*		
College GPA	.06			-.03		
Step 2: Fit		.06*	.05*		.23**	.20**
Convenient Campus	-.02			.11		
Sports	-.01			-.01		
Reputation & Campus Feel	.07			.11		
Southern City	-.00			.22**		
Student Body & Social	.16*			.06		
Financial	.07			-.02		
Small School	.12			.16**		
Religion	.07			.17**		
Activities	-.07			.02		

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Table 12c. Regression Results for Fit Dimensions Predicting Academic and Institutional Adaptation to College

Predictor	DV: SACQ academic[a]			DV: SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.17**			.05		
College GPA	.39**			.19**		
Step 2: Fit		.30**	.07**		.20**	.13**
Convenient Campus	.08			.09		
Sports	-.06			.02		
Reputation & Campus Feel	.04			.11		
Southern City	.16**			.10		
Student Body & Social	.03			.21**		
Financial	-.01			.06		
Small School	.08			.18**		
Religion	-.02			.12*		
Activities	.08			-.13*		

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

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Table 13. Summary of Regression Results for Fit Dimensions as Predictors

	Affective Commitment	Transfer and Search	SACQ emotional	SACQ social	SACQ academic	SACQ institutional
Fit R^2						
Fit ΔR^2						
Convenient Campus β						
Sports β						
Reputation & Campus Feel β						
Southern City β						
Student Body & Social β						
Financial β						
Small School β						
Religion β						
Activities β						

. indicates that the results are significant at the $p < .05$ level, . indicates that the results are significant at the $p < .01$ level.

Table 14a. Regression Results for Convenient Campus Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.15*			-.07		
College GPA	.07			-.09		
Step 2: Main Effects		.12**	.09**		.04*	.02*
Year	-.04			.14*		
Convenient Campus Fit	.25**			-.07		
Step 3: Year x Convenient Campus Fit Interaction	-.11*	.13**	.01*	.06	.04*	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 14b. Regression Results for Convenient Campus Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.04			.12*		
College GPA	.09			.02		
Step 2: Main Effects		.01	.00		.13**	.10**
Year	.05			-.02		
Convenient Campus Fit	-.02			.30**		
Step 3: Year x Convenient Campus Fit Interaction	-.00	.01	.00	-.18**	.16**	.03**

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 14c. Regression Results for Convenient Campus Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.15**			.05		
College GPA	.41**			.24**		
Step 2: Main Effects		.27**	.04**		.10**	.02*
Year	-.05			.02		
Convenient Campus Fit	.18**			.14**		
Step 3: Year x Convenient Campus Fit Interaction	-.16**	.30**	.03**	-.09	.11**	.01

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 15a. Regression Results for Sports Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.15*			-.06		
College GPA	.08			-.08		
Step 2: Main Effects		.09**	.05**		.06**	.04**
Year	-.07			.16**		
Sports Fit	.23**			-.15**		
Step 3: Year x Sports Fit Interaction	-.03	.09**	.00	-.10	.07**	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 15b. Regression Results for Sports Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.03			.15*		
College GPA	.09			.02		
Step 2: Main Effects		.01	.00		.05**	.02
Year	.05			-.02		
Sports Fit	-.01			.13*		
Step 3: Year x Sports Fit Interaction	.05	.01	.00	-.10	.06**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 15c. Regression Results for Sports Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.18**			.07		
College GPA	.40**			.23**		
Step 2: Main Effects		.24**	.00		.08**	.01
Year	-.05			.01		
Sports Fit	.06			.08		
Step 3: Year x Sports Fit Interaction	-.08	.25**	.01	.06	.09**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 16a. Regression Results for Reputation Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.17**			-.07		
College GPA	.08			-.09		
Step 2: Main Effects		.08**	.03**		.04**	.03**
Year	-.06			.16**		
Reputation Fit	.18**			-.11		
Step 3: Year x Reputation Fit Interaction	-.02	.08**	.00	-.05	.05	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 16b. Regression Results for Reputation Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.05			.16**		
College GPA	.10			.02		
Step 2: Main Effects		.02	.01		.06**	.03**
Year	.03			-.04		
Reputation Fit	.09			.19**		
Step 3: Year x Reputation Fit Interaction	-.05	.02	.00	-.03	.06**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 16c. Regression Results for Reputation Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.18**			.06		
College GPA	.40**			.24**		
Step 2: Main Effects		.25**	.01		.10**	.02*
Year	-.06			-.00		
Reputation Fit	.10			.16**		
Step 3: Year x Reputation Fit Interaction	-.05	.25**	.00	-.03	.10**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 17a. Regression Results for Southern City Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.17**			.09		
College GPA	.10			-.09		
Step 2: Main Effects		.09**	.05**		.04*	.02*
Year	-.00			.12*		
Southern City Fit	.19**			-.11		
Step 3: Year x Southern City Fit Interaction	-.08	.10**	.01	-.07	.04*	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 17b. Regression Results for Southern City Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.02			.15*		
College GPA	.08			.05		
Step 2: Main Effects		.02	.01		.10**	.07**
Year	.05			.03		
Southern City Fit	-.02			.25**		
Step 3: Year x Southern City Fit Interaction	.17**	.04*	.03**	-.06	.10**	.00

[a]$N = 367.$ [b]$N = 370.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 17c. Regression Results for Southern City Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.17**			.09		
College GPA	.42**			.24**		
Step 2: Main Effects		.27**	.04**		.08**	.00
Year	-.02			.04		
Southern City Fit	.17**			.07		
Step 3: Year x Southern City Fit Interaction	-.06	.28**	.00	.09	.08**	.01

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 18a. Regression Results for Student Body Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.19**			-.10		
College GPA	.06			-.08		
Step 2: Main Effects		.05**	.00		.03*	.02
Year	-.03			.13*		
Student Body Fit	.01			-.02		
Step 3: Year x Student Body Fit Interaction	.04	.05**	.00	.09	.04*	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 18b. Regression Results for Student Body Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.01			.16**		
College GPA	.06			.02		
Step 2: Main Effects		.03*	.03*		.04*	.01
Year	.04			.00		
Student Body Fit	.14*			-.06		
Step 3: Year x Student Body Fit Interaction	-.10	.04*	.01	.11	.05**	.01

[a]$N = 367.$ [b]$N = 370.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 18c. Regression Results for Student Body Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.18**			.10		
College GPA	.40**			.20**		
Step 2: Main Effects		.24**	.01		.09**	.02*
Year	-.04			.02		
Student Body Fit	-.05			.12*		
Step 3: Year x Student Body Fit Interaction	.08	.25**	.01	-.07	.10**	.01

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 19a. Regression Results for Financial Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.18**			-.06		
College GPA	.08			-.11		
Step 2: Main Effects		.05**	.00		.05**	.03**
Year	-.03			.14		
Financial Fit	.04			-.12*		
Step 3: Year x Financial Fit Interaction	-.07	.05**	.01	-.09	.05**	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 19b. Regression Results for Financial Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.05			.19**		
College GPA	.10			-.01		
Step 2: Main Effects		.01	.00		.04*	.01
Year	.04			.01		
Financial Fit	.04			-.07		
Step 3: Year x Financial Fit Interaction	.05	.01	.00	-.03	.04*	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 19c. Regression Results for Financial Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.20**			.08		
College GPA	.39**			.23**		
Step 2: Main Effects		.24**	.00		.08**	.00
Year	-.04			.03		
Financial Fit	-.02			.02		
Step 3: Year x Financial Fit Interaction	-.00	.24**	.00	.12*	.09**	.01

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 20a. Regression Results for Small School Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.17**			-.07		
College GPA	.03			-.06		
Step 2: Main Effects		.14**	.09**		.09**	.07**
Year	-.02			.13*		
Small School Fit	.30**			-.24**		
Step 3: Year x Small School Fit Interaction	-.00	.14**	.00	.03	.09**	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 20b. Regression Results for Small School Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03	.03**
HS GPA	-.06			.14*		
College GPA	.09			-.02		
Step 2: Main Effects		.02	.02		.12	.09**
Year	.04			-.01		
Small School Fit	.12*			.30**		
Step 3: Year x Small School Fit Interaction	-.09	.03	.01	-.13*	.13	.02*

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 20c. Regression Results for Small School Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.18**			.05		
College GPA	.38**			.21**		
Step 2: Main Effects		.26**	.02*		.14**	.07**
Year	-.04			.02		
Small School Fit	.14**			.26**		
Step 3: Year x Small School Fit Interaction	-.05	.26**	.00	-.12*	.16**	.01*

[a]$N = 370.$ [b]$N = 367.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 21a. Regression Results for Religion Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.20**			-.08		
College GPA	.02			-.06		
Step 2: Main Effects		.08**	.03**		.04*	.02*
Year	-.03			-.14*		
Religion Fit	.19**			-.09		
Step 3: Year x Religion Fit Interaction	-.06	.09**	.00	-.14*	.06**	.02*

[a]$N = 361$. [b]$N = 356$. $*p < .05$, $**p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 21b. Regression Results for Religion Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.04			.19**		
College GPA	.08			-.05		
Step 2: Main Effects		.01	.01		.10**	.06**
Year	.05			-.01		
Religion Fit	.05			.26**		
Step 3: Year x Religion Fit Interaction	.00	.01	.00	-.09	.10**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 21c. Regression Results for Religion Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.19**			.08		
College GPA	.37**			.20**		
Step 2: Main Effects		.24**	.01		.09**	.02
Year	-.04			.03		
Religion Fit	.07			.13*		
Step 3: Year x Religion Fit Interaction	-.07	.25**	.01	-.13*	.11**	.02*

[a]$N = 370.$ [b]$N = 367.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 22a. Regression Results for Activities Dimension of Fit and Year in School Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.19**			-.09		
College GPA	.05			-.09		
Step 2: Main Effects		.07**	.02*		.04*	.02*
Year	-.05			.12*		
Activities Fit	.15**			.05		
Step 3: Year x Activities Fit Interaction	.05	.07**	.00	.05	.04*	.02

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 22b. Regression Results for Activities Dimension of Fit and Year in School Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.03			.17**		
College GPA	.10			-.01		
Step 2: Main Effects		.01	.01		.08**	.04**
Year	.06			-.04		
Activities Fit	-.06			.22**		
Step 3: Year x Activities Fit Interaction	.12*	.03	.01*	-.06	.08**	.00

[a]$N = 367.$ [b]$N = 370.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 22c. Regression Results for Activities Dimension of Fit and Year in School Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.19**			.08		
College GPA	.38**			.23**		
Step 2: Main Effects		.26**	.03**		.08**	.00
Year	-.07			.03		
Activities Fit	.16**			-.01		
Step 3: Year x Activities Fit Interaction	-.08	.27**	.01	-.00	.08**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 23. Summary Results for Year by Fit Interactions

	Affective Commitment	Transfer and Search	SACQ Emotional	SACQ Social	SACQ Academic	SACQ Institutional
Main Effects ΔR^2						
Fit Co.						
Fit Sp.						
Fit Re.						
Fit So.						
Fit St.						
Fit Fi.						
Fit Sm.						
Fit Re.						
Fit Ac.						
Year x Fit Interaction ΔR^2						
Fit Co.						
Fit Sp.						
Fit Re.						
Fit So.						
Fit St.						
Fit Fi.						
Fit Sm.						
Fit Re.						
Fit Ac.						

. indicates that the results are significant at the $p < .05$ level, . indicates that the results are significant at the $p < .01$ level. Fit Co. refers to the convenient campus dimension of fit, Fit Sp. to sports, Fit Re. to reputation and campus feel, Fit So. to southern city, Fit. St. to student body and social, Fit Fi. to financial, Fit Sm. to small school, Fit Re. to religion, and Fit Ac. to activities.

Table 24a. Regression Results for Convenient Campus Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.11			-.06		
College GPA	.09			-.09		
Step 2: Main Effects		.15**	.10**		.03	.01
Resilience	.21**			-.13*		
Convenient Campus Fit	.18**			-.03		
Step 3: Resilience x Convenient Campus Fit Interaction	-.01	.15**	.00	-.10	.03	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 24b. Regression Results for Convenient Campus Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.02			.04		
College GPA	.09			.05		
Step 2: Main Effects		.01	.00		.26**	.23**
Resilience	.03			.36**		
Convenient Campus Fit	-.01			.18**		
Step 3: Resilience x Convenient Campus Fit Interaction	.06	.01	.00	-.07	.26**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 24c. Regression Results for Convenient Campus Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.06			.06		
College GPA	.45**			.23**		
Step 2: Main Effects		.43**	.20**		.10**	.03**
Resilience	.42**			.07		
Convenient Campus Fit	.04			.14*		
Step 3: Resilience x Convenient Campus Fit Interaction	-.06	.44**	.00	.03	.10**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 25a. Regression Results for Sports Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.09			-.03		
College GPA	.10			-.10		
Step 2: Main Effects		.14**	.09**		.04*	.02*
Resilience	.22**			-.10		
Sports Fit	.15**			-.10		
Step 3: Resilience x Sports Fit Interaction	-.04	.14**	.00	-.06	.04*	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 25b. Regression Results for Sports Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.03			.04		
College GPA	.09			.05		
Step 2: Main Effects		.01	.00		.26**	.23**
Resilience	.14			.36**		
Sports Fit	.07			.18**		
Step 3: Resilience x Sports Fit Interaction	.06	.01	.00	-.07	.26**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 25c. Regression Results for Sports Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.08			.05		
College GPA	.45**			.24**		
Step 2: Main Effects		.44**	.20**		.09**	.02
Resilience	.46**			.09		
Sports Fit	-.08			.07		
Step 3: Resilience x Sports Fit Interaction	-.05	.44**	.00	-.00	.09**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 26a. Regression Results for Reputation Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.10			-.03		
College GPA	.10			-10		
Step 2: Main Effects		.13**	.08**		.03	.01
Resilience	.24**			-.09		
Reputation Fit	.11			-.06		
Step 3: Resilience x Reputation Fit Interaction	-.02	.13**	.00	.01	.03	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 26b. Regression Results for Reputation Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.03			.04		
College GPA	.10			.06		
Step 2: Main Effects		.01	.01		.23**	.20**
Resilience	-.00			.40**		
Reputation Fit	.07			.09		
Step 3: Resilience x Reputation Fit Interaction	.06	.02	.00	-.09	.24**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 26c. Regression Results for Reputation Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.08			.05		
College GPA	.44**			.25**		
Step 2: Main Effects		.43**	.20**		.10**	.03**
Resilience	.45**			.08		
Reputation Fit	-.04			.13*		
Step 3: Resilience x Reputation Fit Interaction	.01	.43**	.00	.02	.10**	.00

[a]$N = 370.$ [b]$N = 367.$ *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 27a. Regression Results for Southern City Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.12			-.06		
College GPA	.11			-.10		
Step 2: Main Effects		.13**	.09**		.03	.02
Resilience	.21**			-.11		
Southern City Fit	.14*			-.06		
Step 3: Resilience x Southern City Fit Interaction	-.04	.13**	.00	-.10	.04*	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 27b. Regression Results for Southern City Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.04			.06		
College GPA	.08			.07		
Step 2: Main Effects		.01	.01		.24**	.20**
Resilience	.03			.40**		
Fit	-.09			.11*		
Step 3: Resilience x Fit Interaction	-.00	.01	.00	-.05	.24**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 27c. Regression Results for Southern City Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.06			.07		
College GPA	.45**			.24**		
Step 2: Main Effects		.43**	.20**		.09**	.01
Resilience	.42**			.12		
Fit	.04			-.00		
Step 3: Resilience x Fit Interaction	-.09*	.44**	.01*	.03	.09**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 28a. Regression Results for Student Body Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.11			-.05		
College GPA	.09			-.08		
Step 2: Main Effects		.12**	.07**		.03	.01
Resilience	.28**			-.13*		
Fit	.05			-.05		
Step 3: Resilience x Fit Interaction	.04	.12**	.00	.08	.03	.01

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 28b. Regression Results for Student Body Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.03			.06		
College GPA	.06			.06		
Step 2: Main Effects		.03*	.03*		.23**	.19**
Resilience	.03			.45**		
Fit	.17**			.01		
Step 3: Resilience x Fit Interaction	.00	.03	.00	.03	.23**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 28c. Regression Results for Student Body Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.06			.06		
College GPA	.44**			.21		
Step 2: Main Effects		.43**	.20**		.11**	.04**
Resilience	.44**			.14*		
Fit	.01			.17**		
Step 3: Resilience x Fit Interaction	.06	.44**	.00	-.01	.11**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 29a. Regression Results for Financial Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.12			-.02		
College GPA	.10			-.12		
Step 2: Main Effects		.12**	.07**		.03*	.02*
Resilience	.28**			-.09		
Fit	.01			-.10		
Step 3: Resilience x Fit Interaction	.01	.12**	.00	.03	.04	.00

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 29b. Regression Results for Financial Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.04			.08		
College GPA	.10			.03		
Step 2: Main Effects		.01	.00		.24**	.21**
Resilience	-.01			.47**		
Fit	.04			-.12*		
Step 3: Resilience x Fit Interaction	-.00	.01	.00	.01	.24**	.00

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 29c. Regression Results for Financial Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.09			.05		
College GPA	.43**			.24**		
Step 2: Main Effects		.44**	.20**		.09**	.01
Resilience	.47**			.10		
Fit	-.08			.02		
Step 3: Resilience x Fit Interaction	.05	.40**	.00	-.06	.09**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 30a. Regression Results for Small School Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.11			-.07		
College GPA	.06			-.06		
Step 2: Main Effects		.19**	.14**		.08**	.06**
Resilience	.23**			-.15*		
Fit	.26**			-.24**		
Step 3: Resilience x Fit Interaction	-.01	.19**	.01	-.20**	.11**	.03**

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 30b. Regression Results for Small School Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03*
HS GPA	-.01			.04		
College GPA	.07			.04		
Step 2: Main Effects		.02	.02		.28**	.24**
Resilience	.05			.37**		
Fit	.13*			.23**		
Step 3: Resilience x Fit Interaction	.16*	.04*	.02*	-.11	.29**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 30c. Regression Results for Small School Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.05			.07		
College GPA	.44**			.21**		
Step 2: Main Effects		.44**	.20**		.14**	.07**
Resilience	.40**			.11		
Fit	.06			.25**		
Step 3: Resilience x Fit Interaction	-.10	.44**	.01	.11	.15**	.01

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 31a. Regression Results for Religion Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.13*			-.06		
College GPA	.06			-.08		
Step 2: Main Effects		.15**	.10**		.03*	.02
Resilience	.27**			-.14*		
Fit	.18**			-.08		
Step 3: Resilience x Fit Interaction	-.02	.15**	.00	-.14*	.05**	.02*

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 31b. Regression Results for Religion Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.02			.07		
College GPA	.08			.01		
Step 2: Main Effects		.01	.00		.28**	.25**
Resilience	.01			.43**		
Fit	.05			.24**		
Step 3: Resilience x Fit Interaction	.04	.01	.00	-.08	.29**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 31c. Regression Results for Religion Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.06			.08		
College GPA	.44**			.22**		
Step 2: Main Effects		.43**	.20**		.10**	.03*
Resilience	.44**			.13*		
Fit	.05			.12*		
Step 3: Resilience x Fit Interaction	-.09	.44**	.01	.12*	.11**	.01*

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 32a. Regression Results for Activities Dimension of Fit and Resilience Interactions Predicting Commitment and Intentions to Transfer and Search Behaviors

Predictor	Affective Commitment[a]			Transfer and Search[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.05**	.05**		.02	.02
HS GPA	.12*			-.05		
College GPA	.09			-.10		
Step 2: Main Effects		.13**	.08**		.04*	.02*
Resilience	.25**			-.17**		
Fit	.09			.12*		
Step 3: Resilience x Fit Interaction	-.01	.13**	.00	-.13*	.05**	.02*

[a]$N = 361$. [b]$N = 356$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 32b. Regression Results for Activities Dimension of Fit and Resilience Interactions Predicting Emotional and Social Adjustment to College

Predictor	SACQ emotional[a]			SACQ social[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.01	.01		.03**	.03**
HS GPA	-.04			.05		
College GPA	.10			.05		
Step 2: Main Effects		.01	.00		.24**	.20**
Resilience	-.00			.40**		
Fit	-.04			.10*		
Step 3: Resilience x Fit Interaction	-.04	.01	.00	-.08	.24**	.01

[a]$N = 367$. [b]$N = 370$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 32c. Regression Results for Activities Dimension of Fit and Resilience Interactions Predicting Academic and Institutional Adjustment to College

Predictor	SACQ academic[a]			SACQ institutional[b]		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1: Controls		.24**	.24**		.07**	.07**
HS GPA	.05			.06		
College GPA	.45**			.25**		
Step 2: Main Effects		.43**	.20**		.09**	.01
Resilience	.41**			.13*		
Fit	.04			-.04		
Step 3: Resilience x Fit Interaction	-.13**	.45**	.02**	.04	.09**	.00

[a]$N = 370$. [b]$N = 367$. *$p < .05$, **$p < .01$.

Note that the year and fit terms were centered prior to forming the interaction term and entered into the regression.

Table 33. Summary Results for Fit by Resilience Interactions

	Affective Commitment	Transfer and Search	SACQ Emotional	SACQ Social	SACQ Academic	SACQ Institutional
Main Effects ΔR^2						
Fit Co.						
Fit Sp.						
Fit Re.						
Fit So.						
Fit St.						
Fit Fi.						
Fit Sm.						
Fit Re.						
Fit Ac.						
Fit x Resilience Interaction ΔR^2						
Fit Co.						
Fit Sp.						
Fit Re.						
Fit So.						
Fit St.						
Fit Fi.						
Fit Sm.						
Fit Re.						
Fit Ac.						

 indicates that the results are significant at the $p < .05$ level, indicates that the results are significant at the $p < .01$ level. Fit Co. refers to the convenient campus dimension of fit, Fit Sp. to sports, Fit Re. to reputation and campus feel, Fit So. to southern city, Fit. St. to student body and social, Fit Fi. to financial, Fit Sm. to small school, Fit Re. to religion, and Fit Ac. to activities.

FIGURES

Figure 1: Convenient Campus Fit Dimension x Year in School Interaction Predicting Affective Commitment
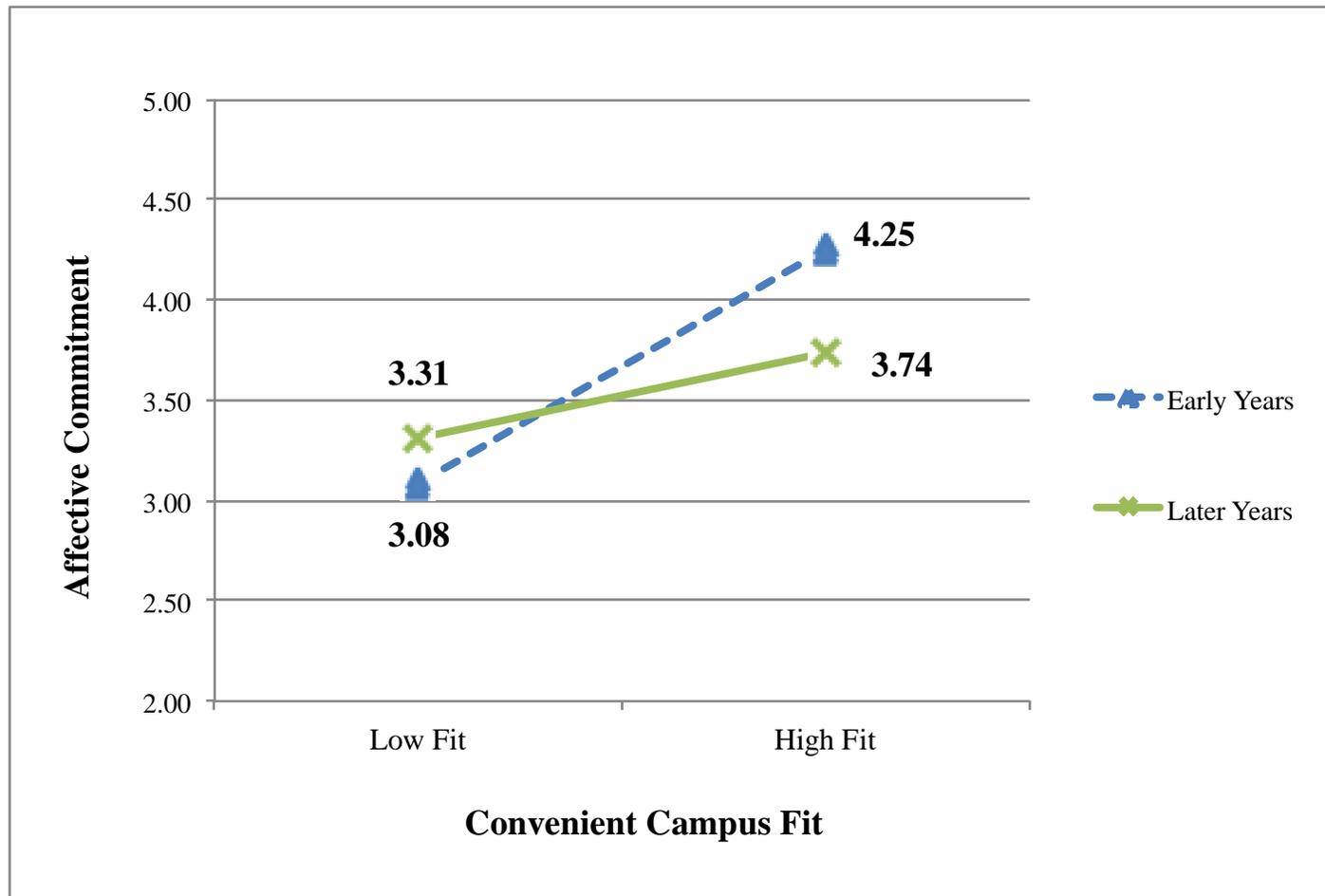
Figure 2. Convenient Campus Fit Dimension x Year in School Interaction Predicting Social Adjustment to College
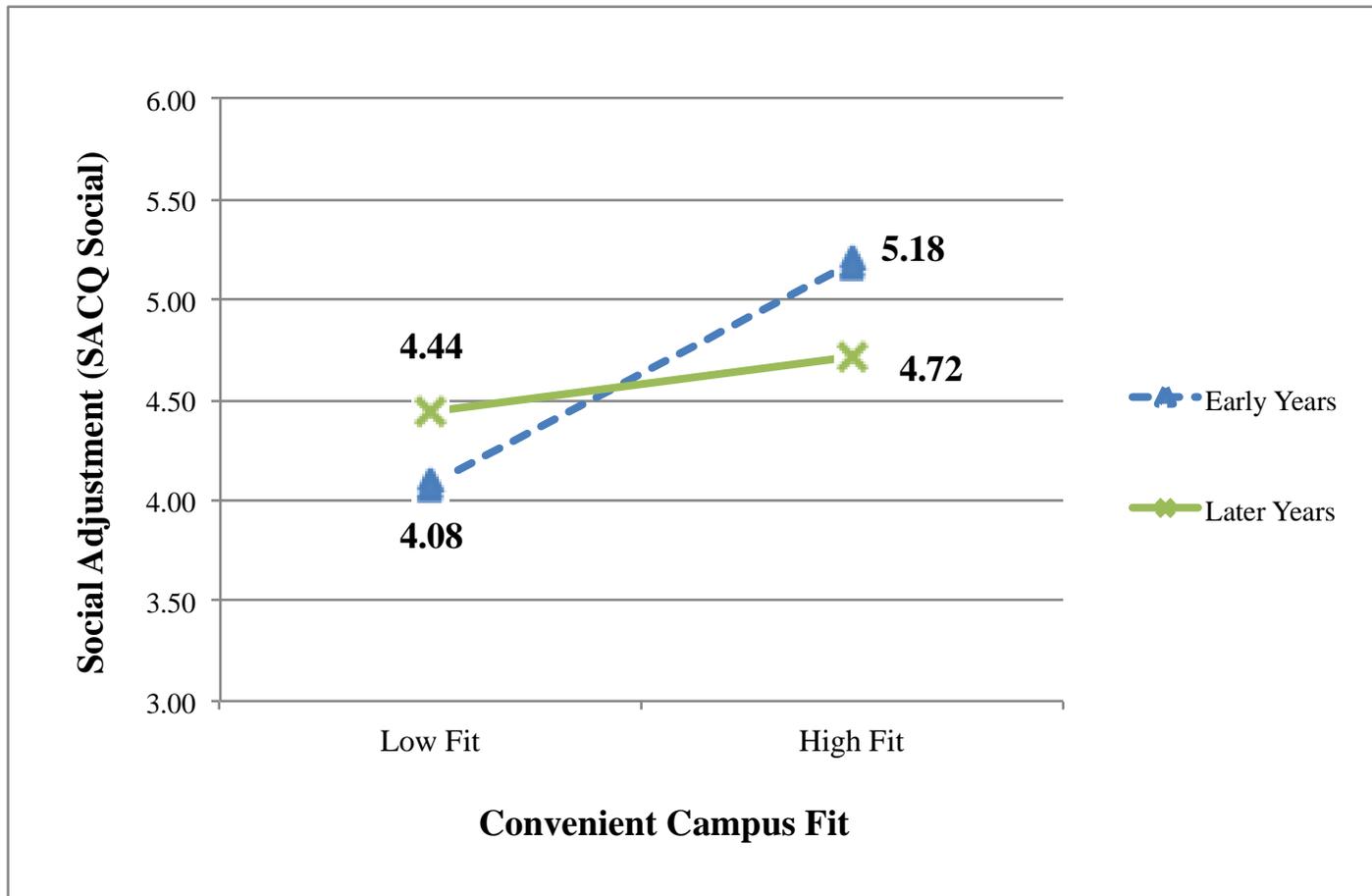
Figure 3. Convenient Campus Fit Dimension x Year in School Interaction Predicting Academic Adjustment to College
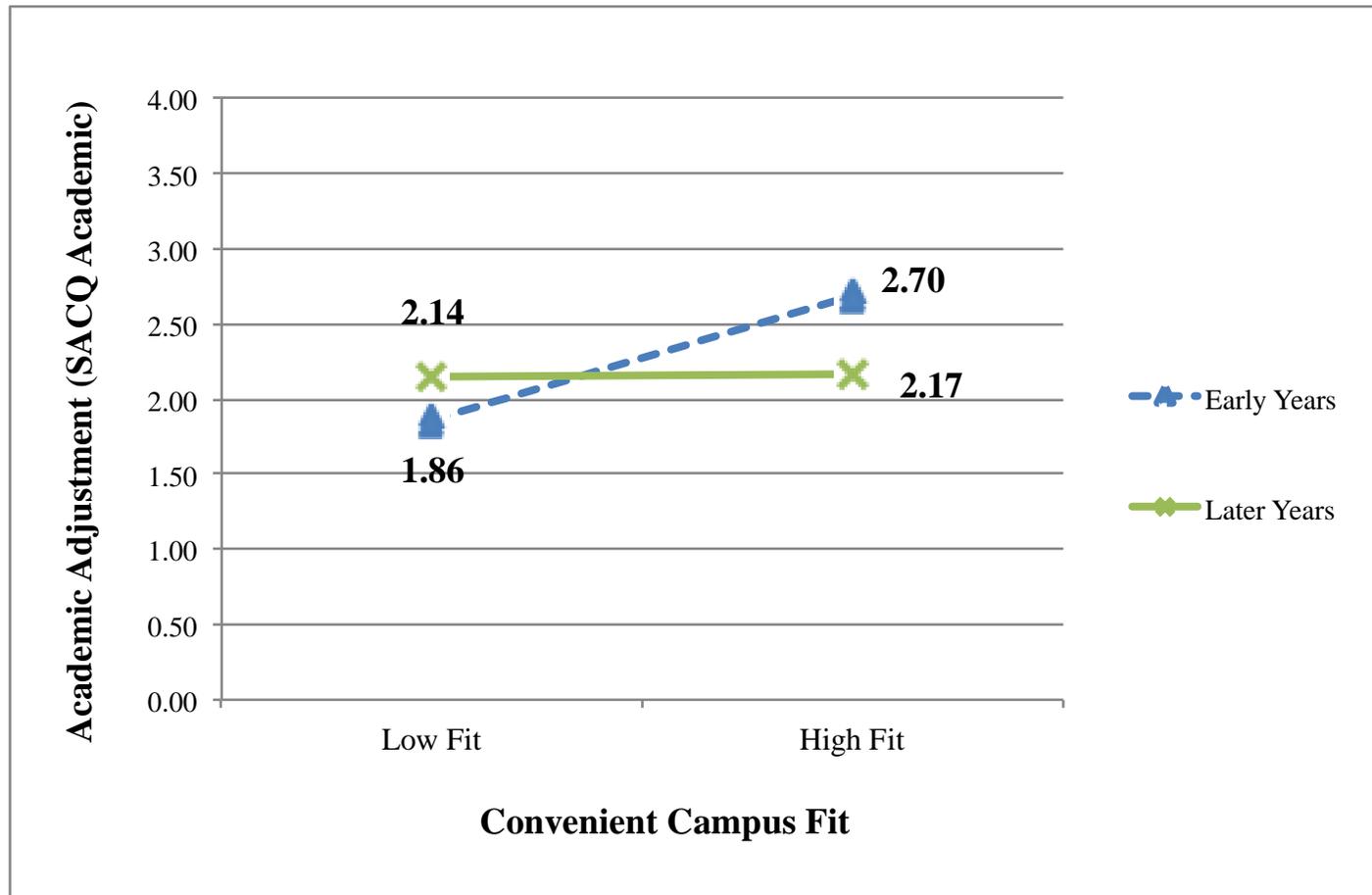
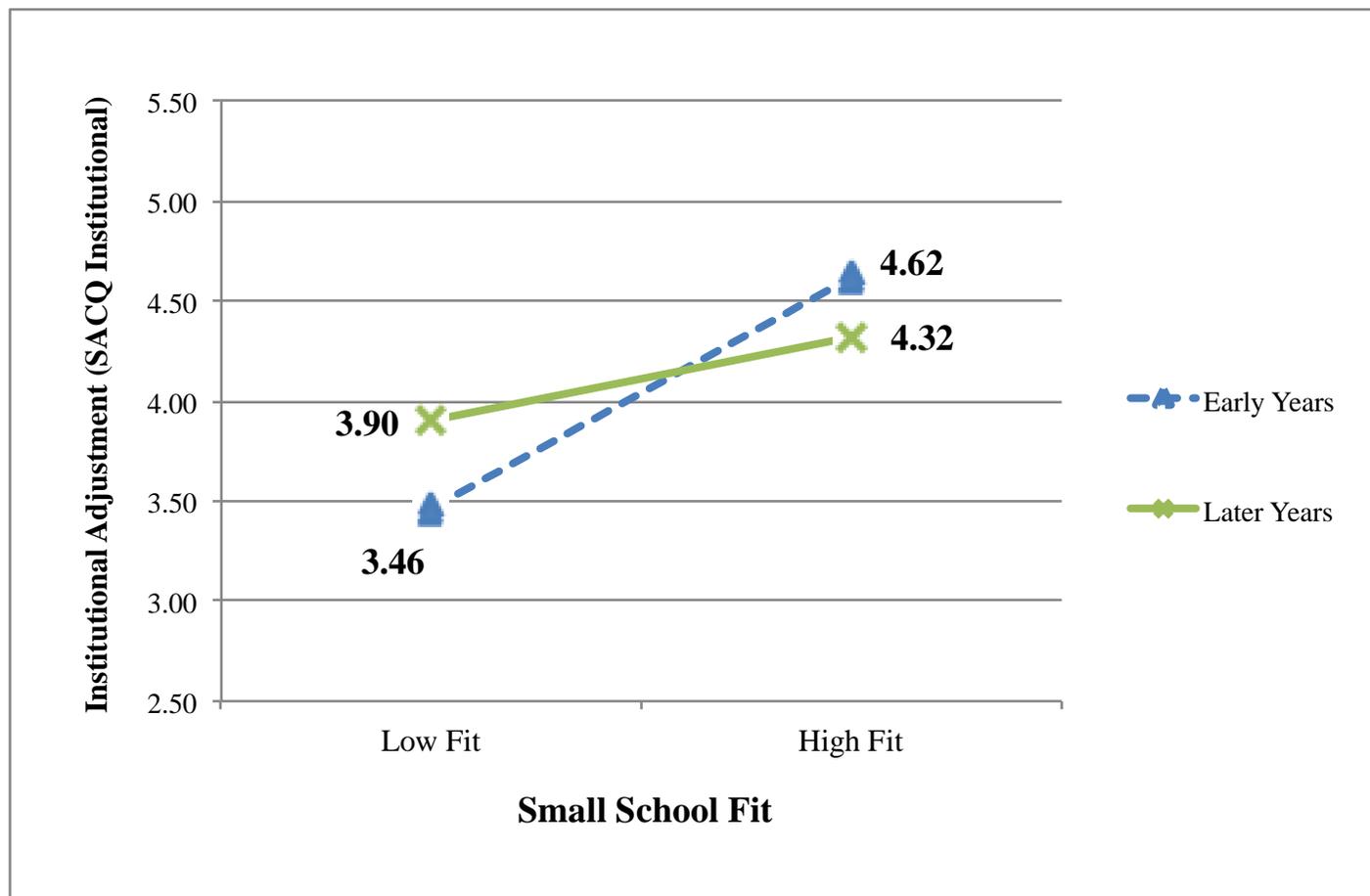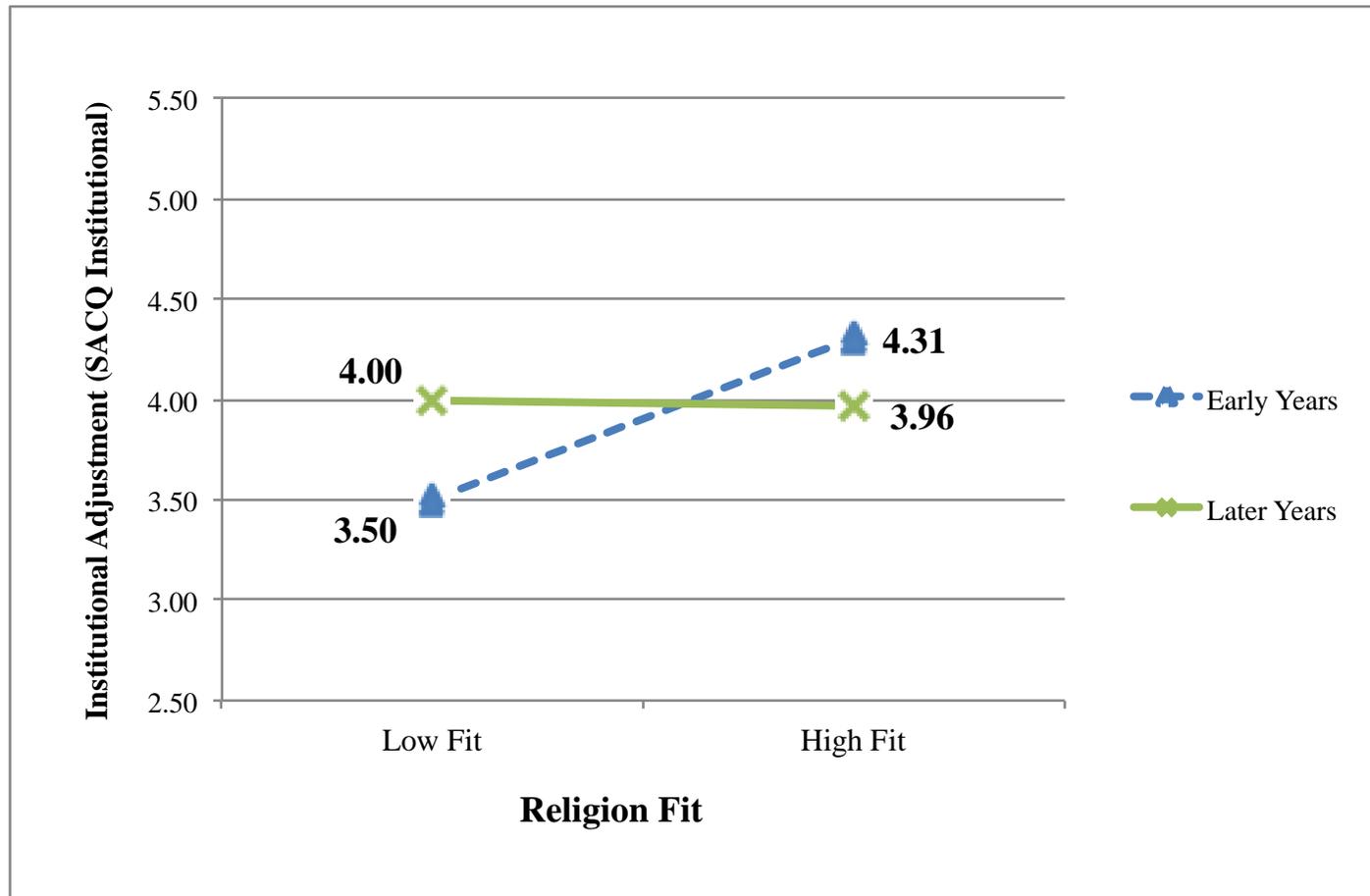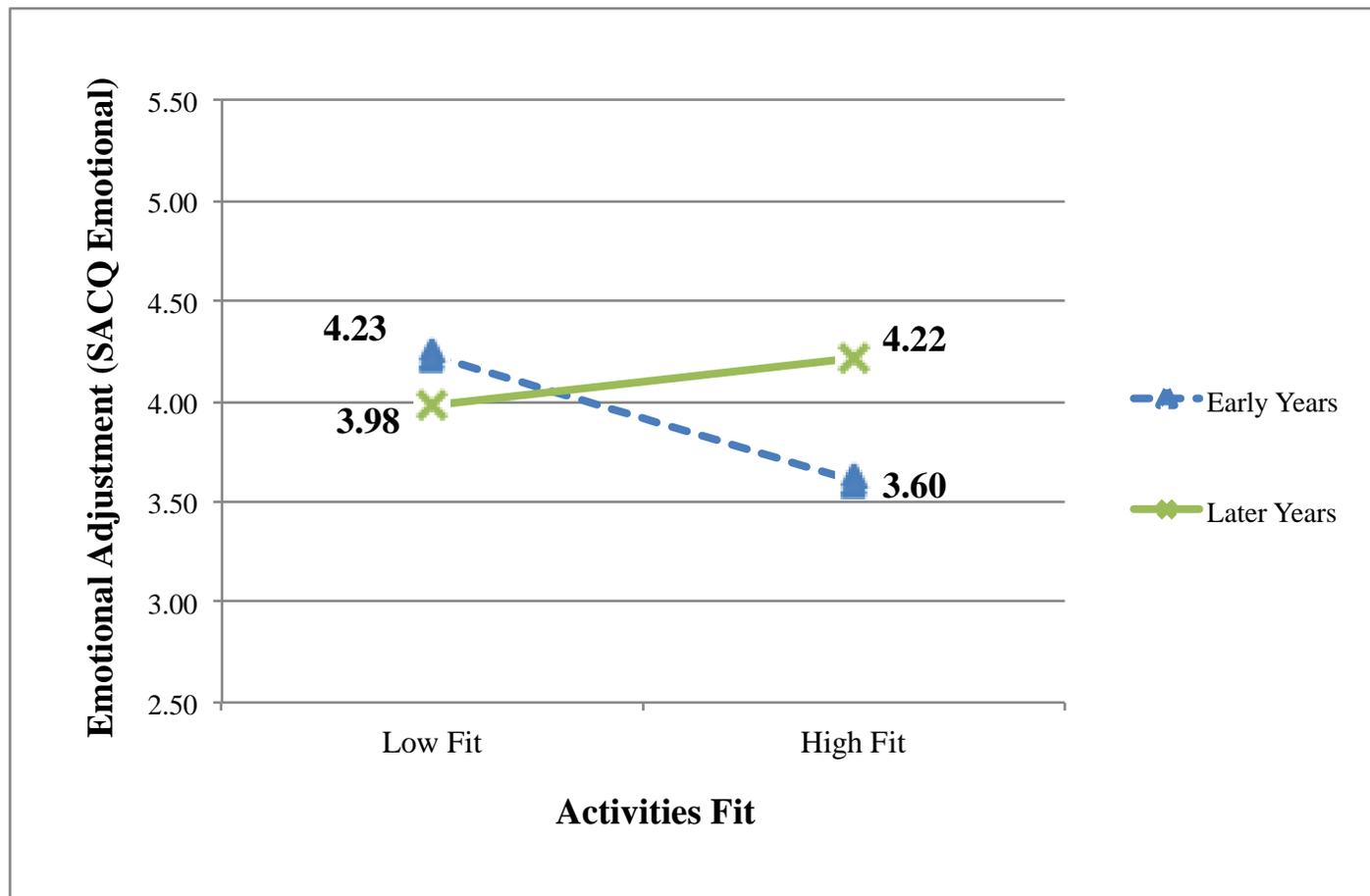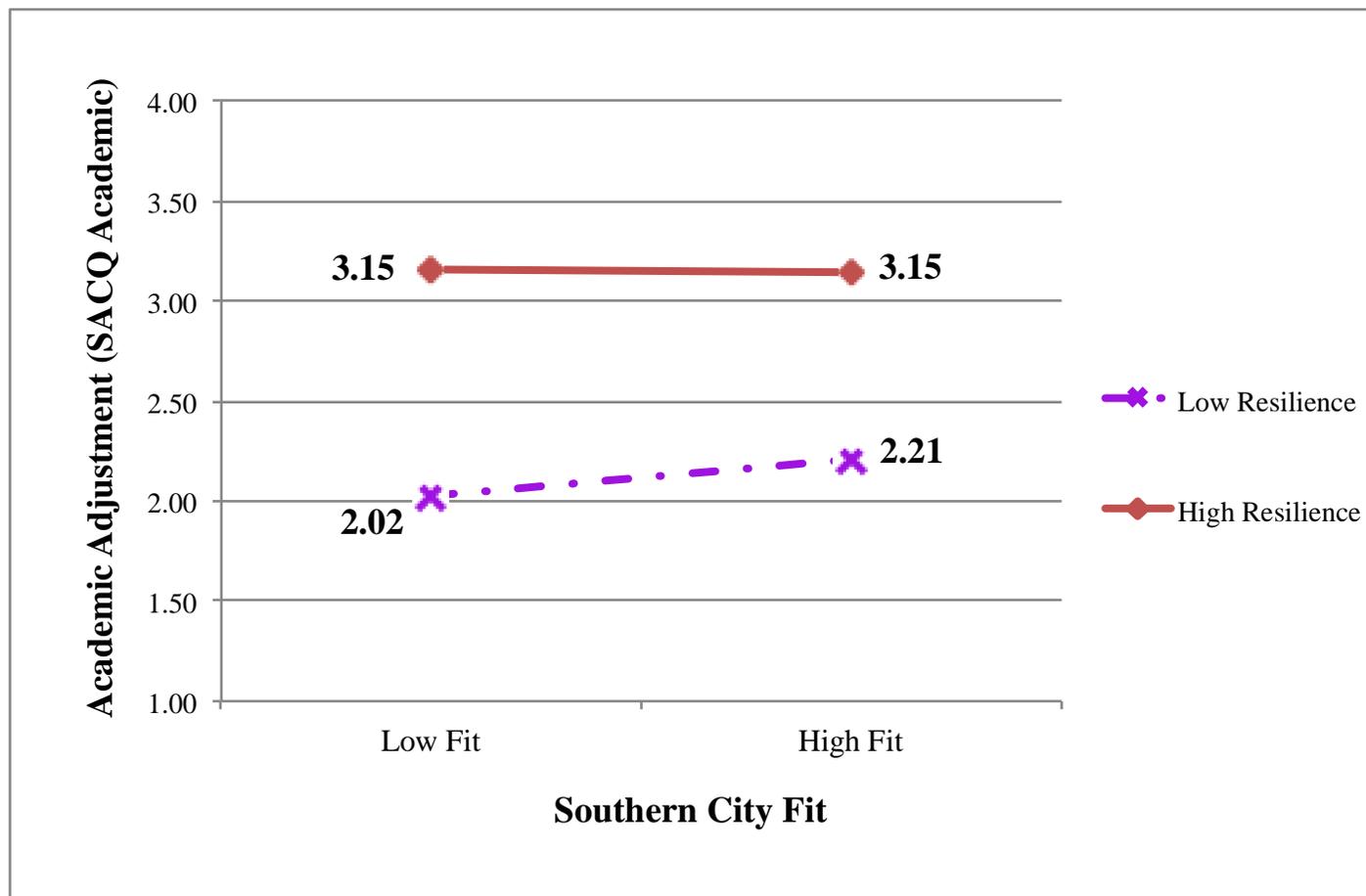Figure 4. Southern City Fit Dimension x Year in School Interaction Predicting Emotional Adjustment to College
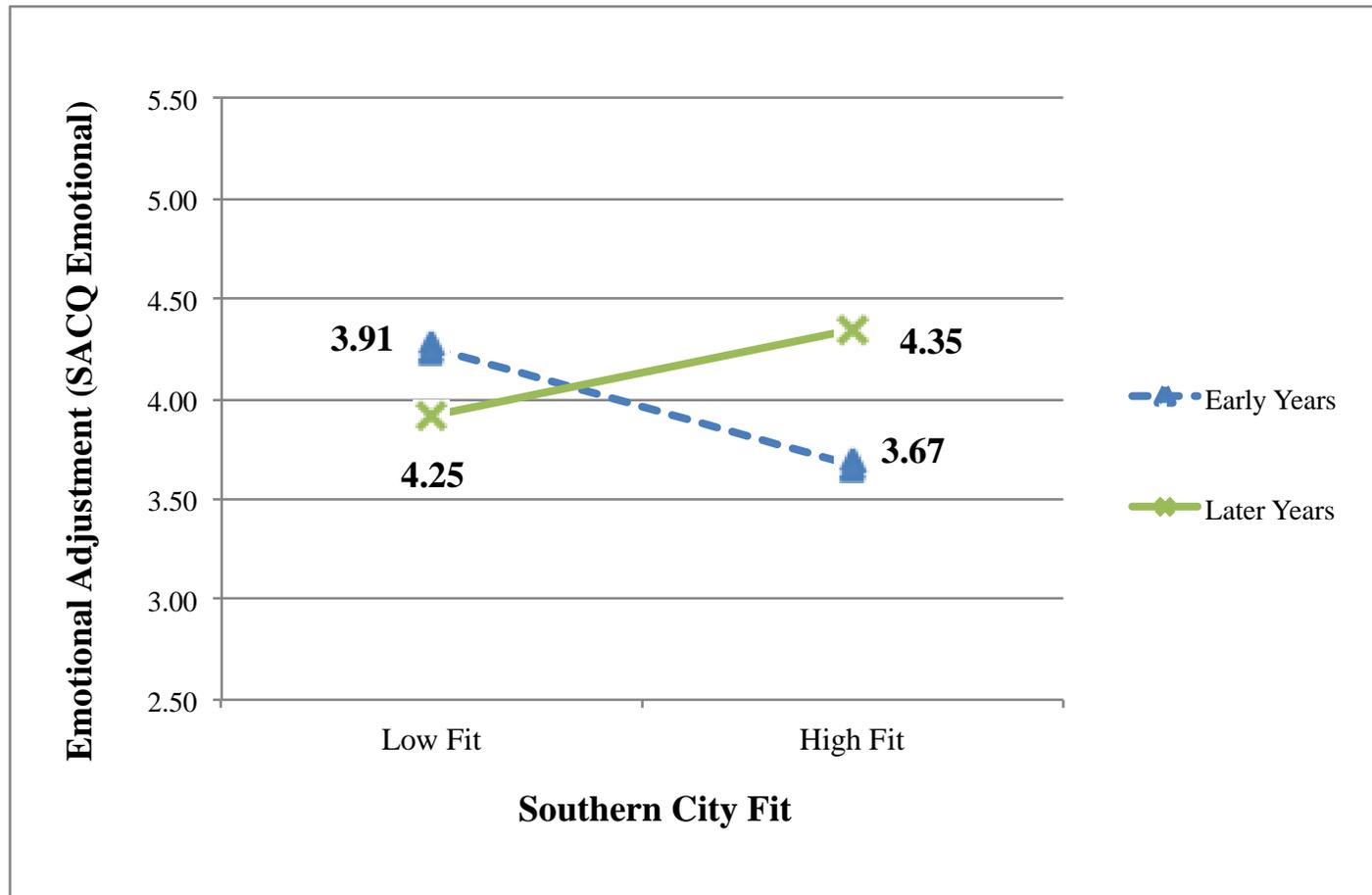
Figure 5. Small School Fit Dimension x Year in School Interaction Predicting Social Adjustment to College
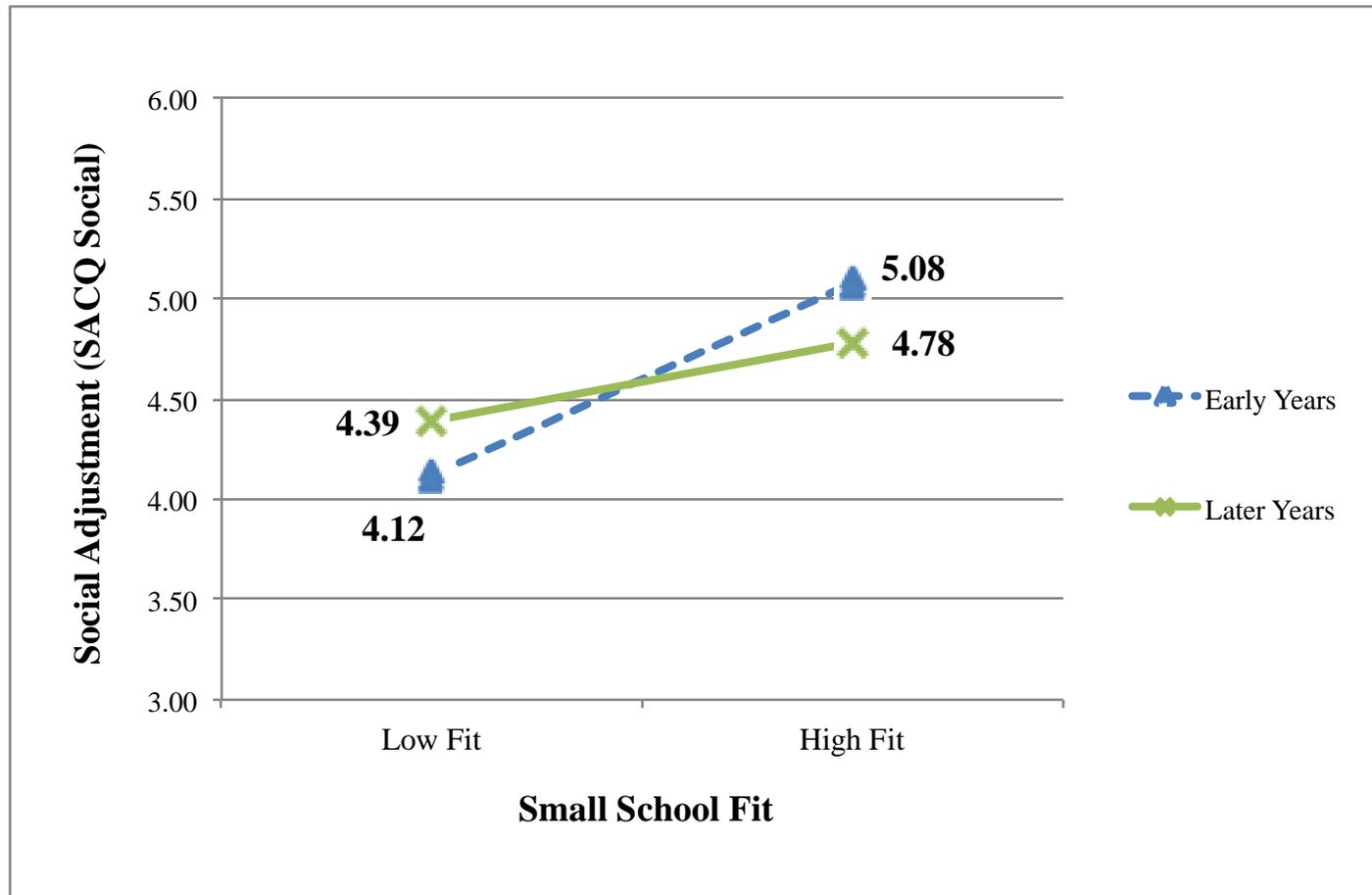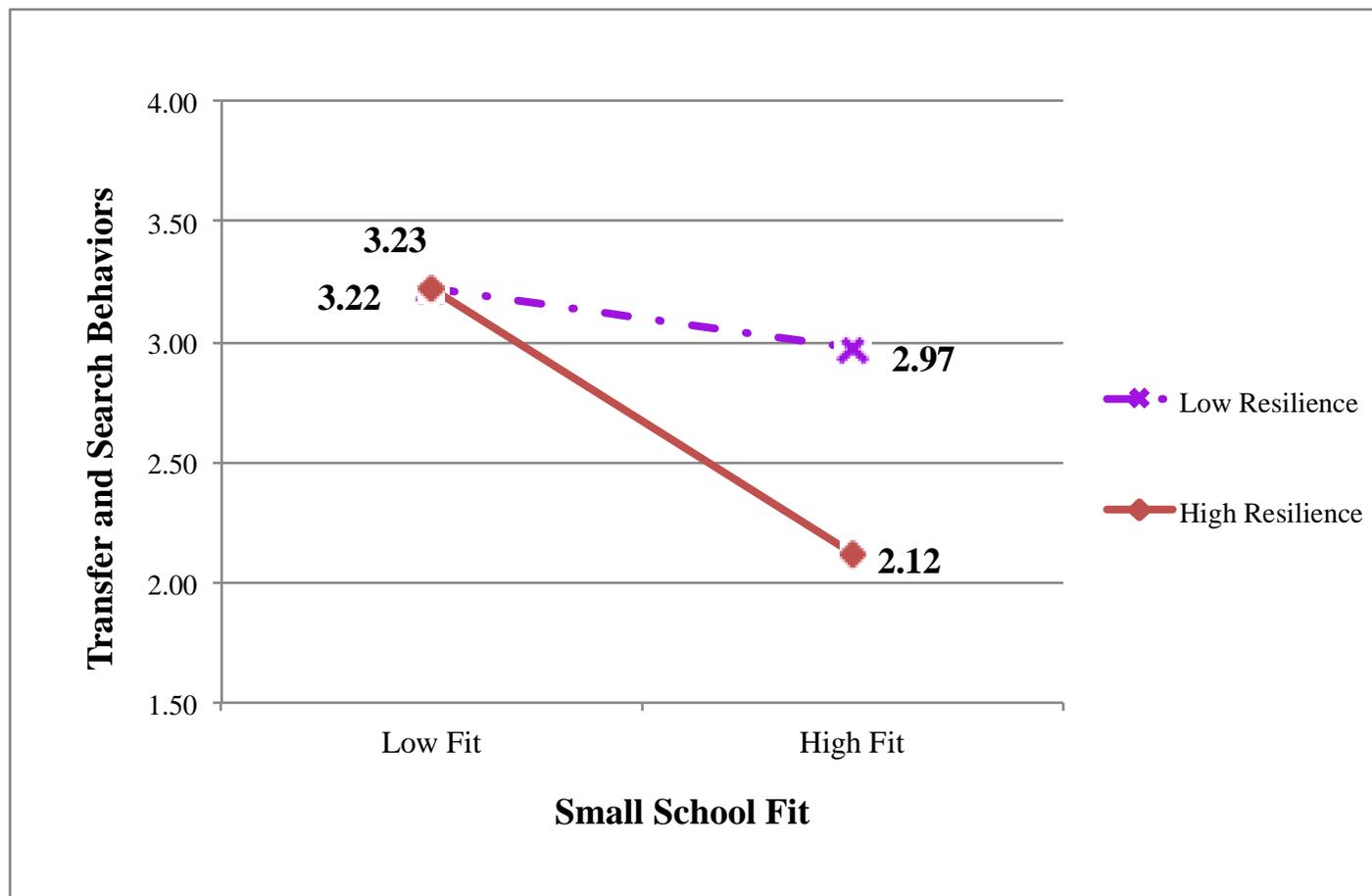
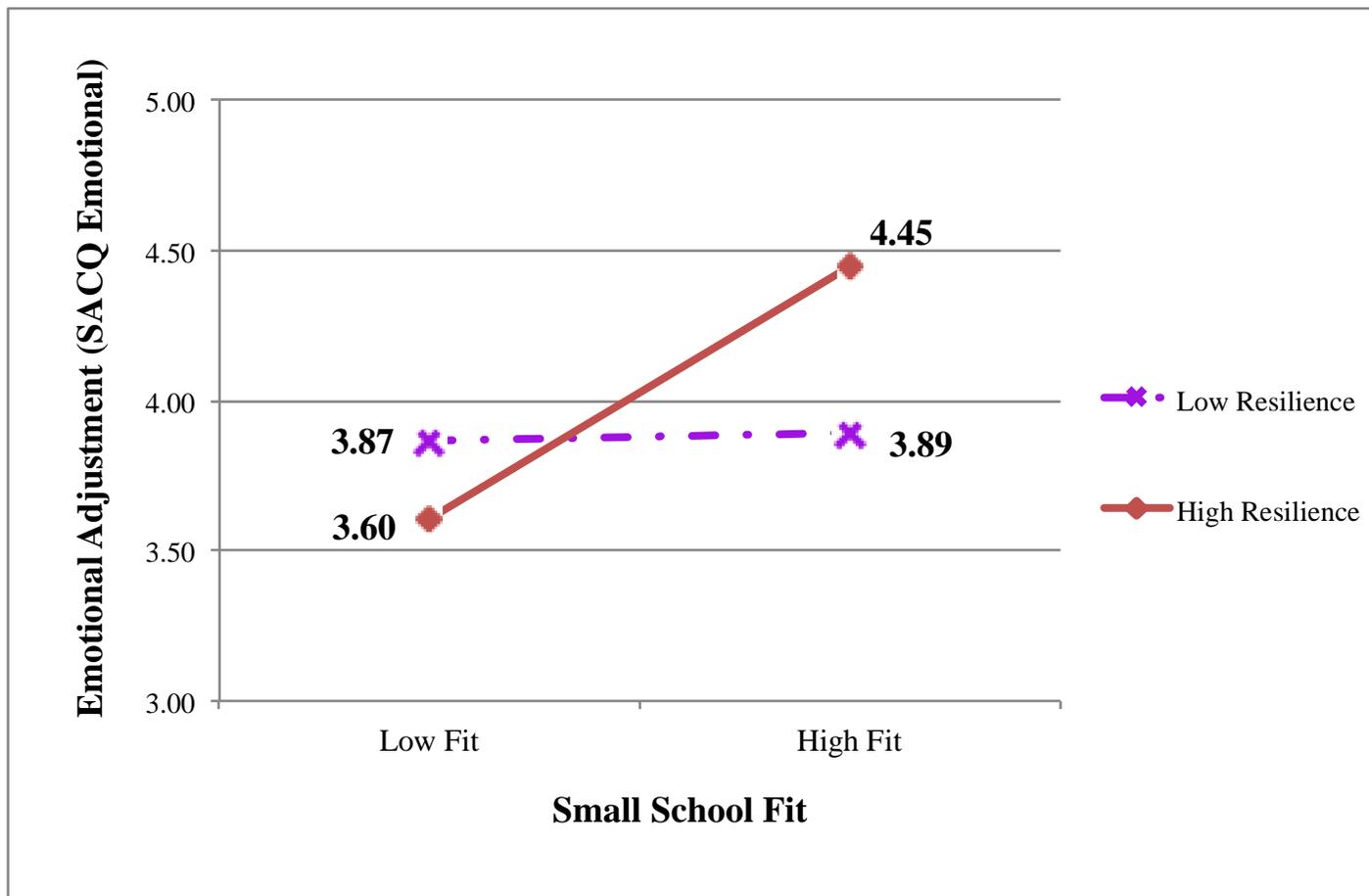Figure 6. Small School Fit Dimension x Year in School Interaction Predicting Institutional Adjustment to College

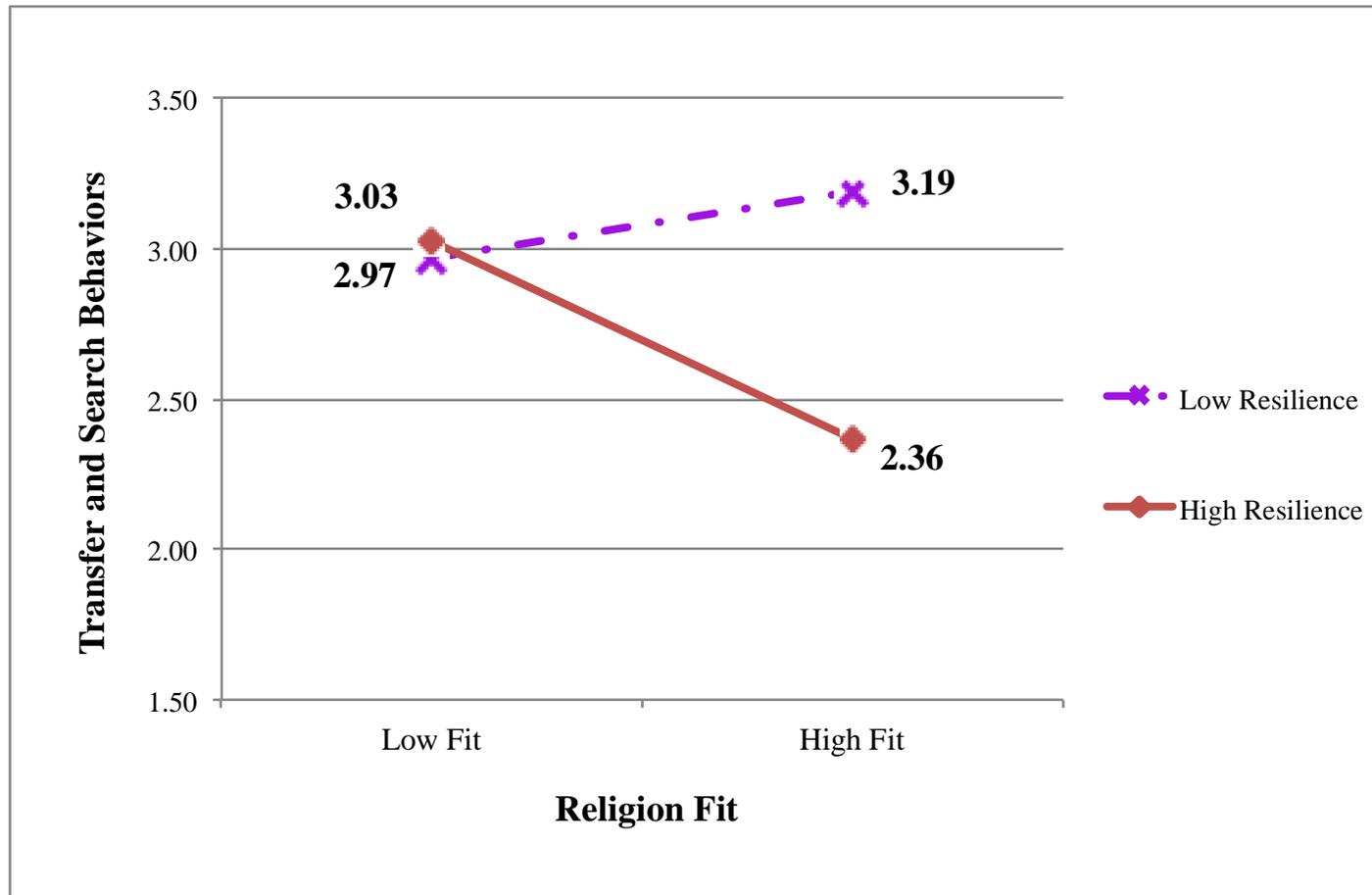Figure 7. Religion Fit Dimension x Year in School Interaction Predicting Transfer and Search Behaviors
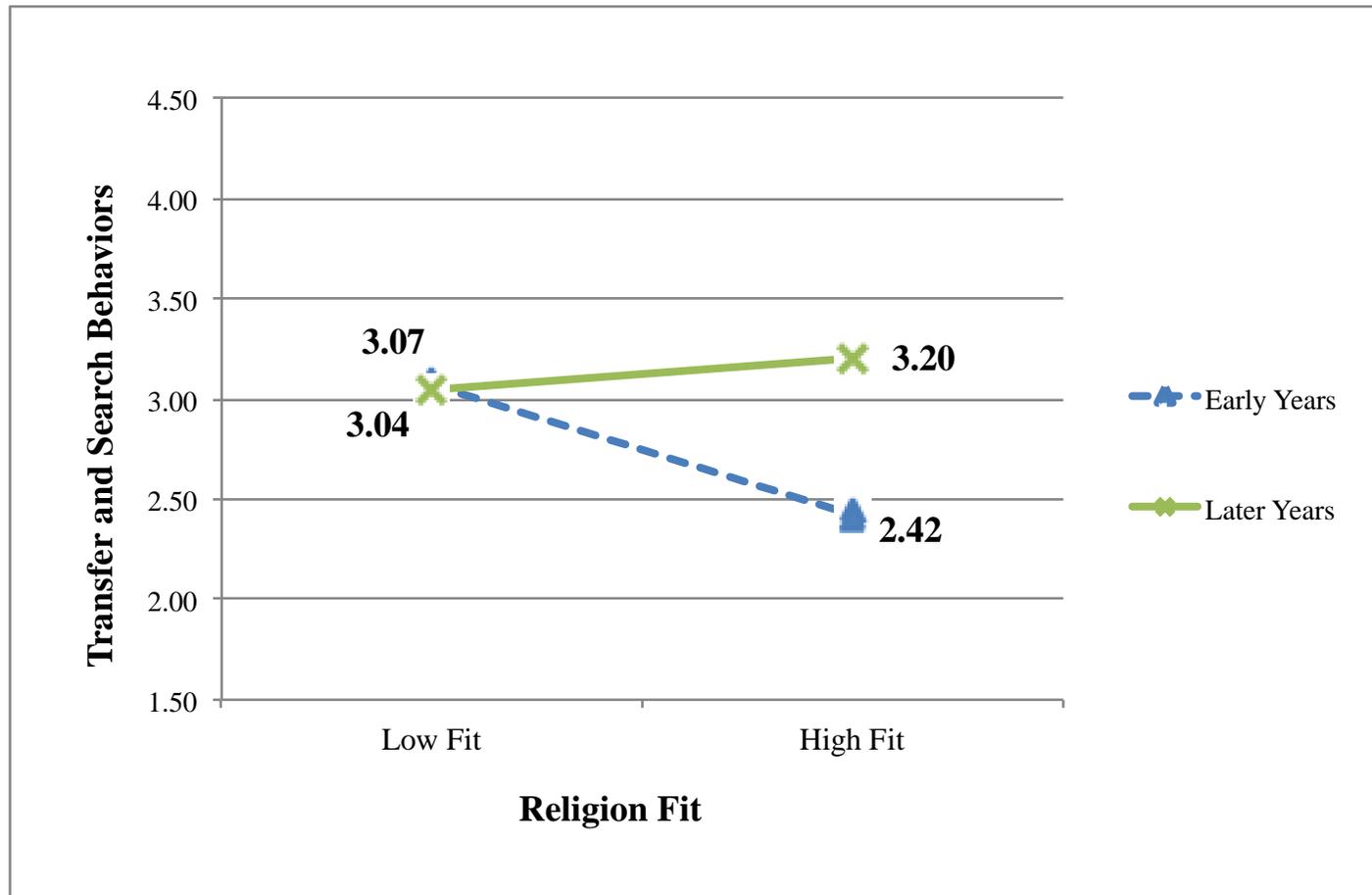
Figure 8. Religion Fit Dimension x Year in School Interaction Predicting Institutional Adjustment to College

Figure 9. Activities Fit Dimension x Year in School Interaction Predicting Emotional Adjustment to College

Figure 10. Southern City Fit Dimension x Resilience Interaction Predicting Academic Adjustment to College

Figure 11. Small School Fit Dimension x Resilience Interaction Predicting Transfer and Search Behaviors

Figure 12. Small School Fit Dimension x Resilience Interaction Predicting Emotional Adjustment to College

Figure 13. Religion Fit Dimension x Resilience Interaction Predicting Transfer and Search Behaviors

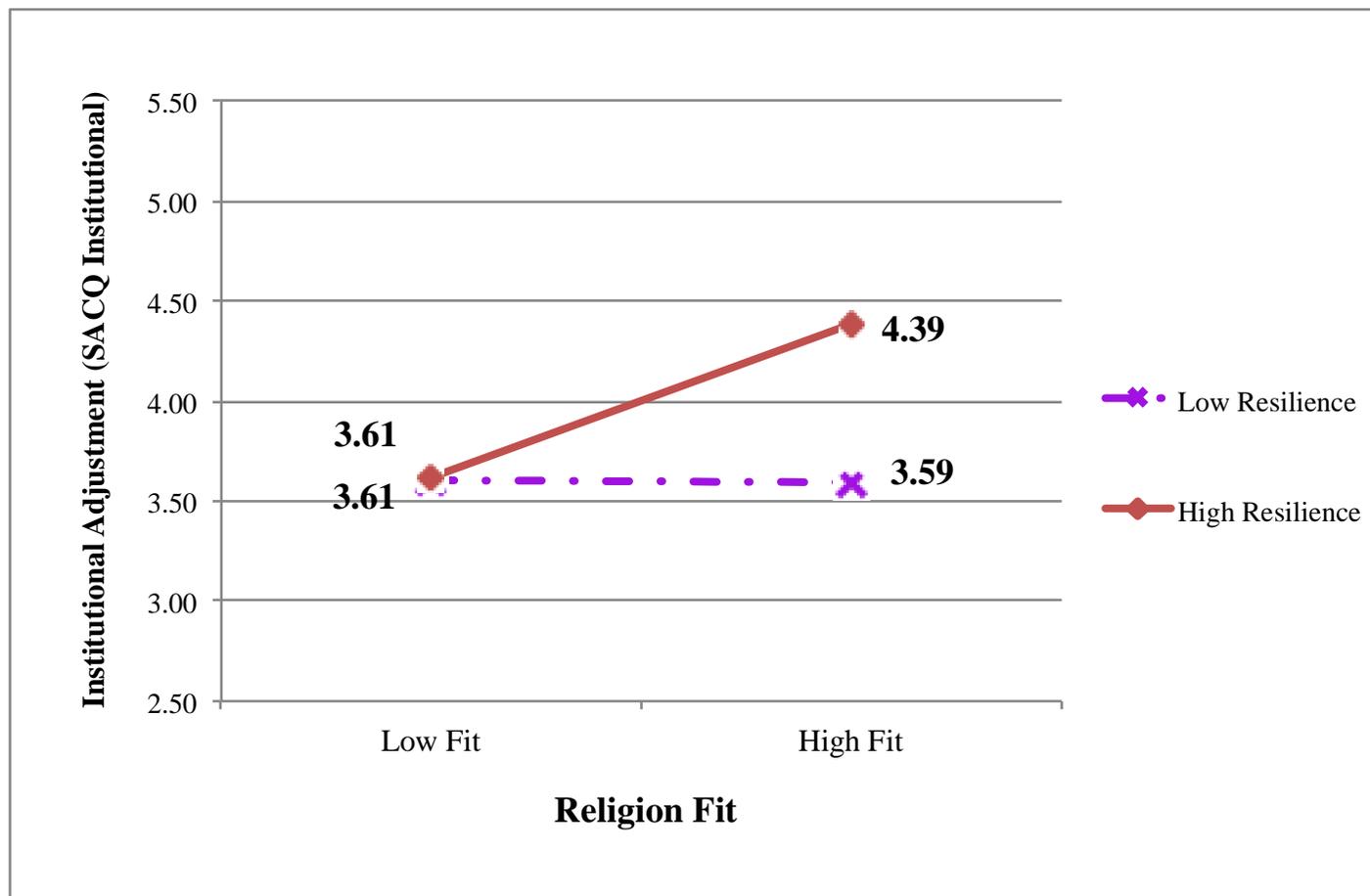Figure 14. Religion Fit Dimension x Resilience Interaction Predicting Institutional Adjustment to College

Figure 15. Activities Fit Dimension x Resilience Interaction Predicting Transfer and Search Behaviors
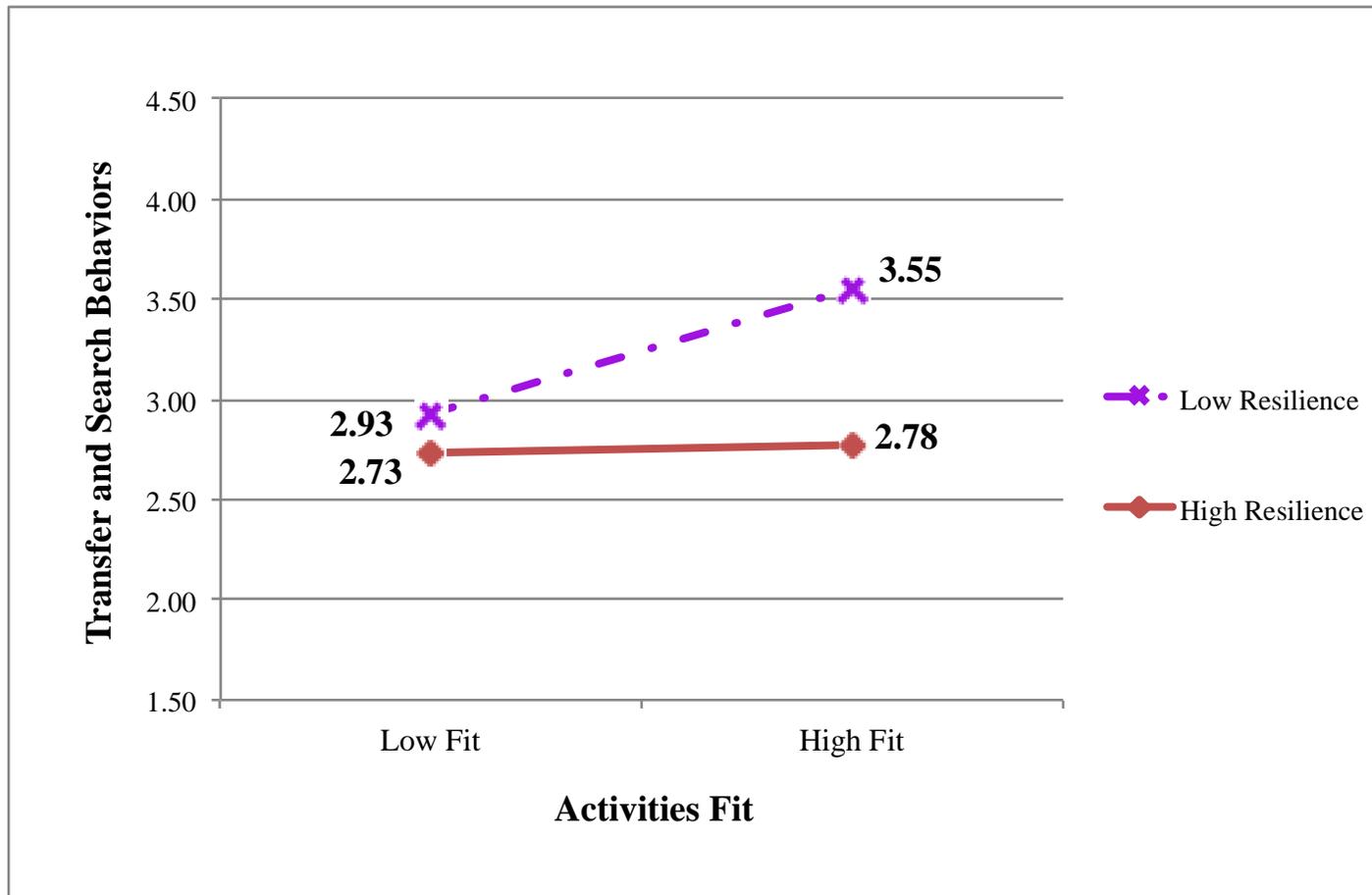
Figure 16. Activities Fit Dimension x Resilience Interaction Predicting Academic Adjustment to College