A Psychosociocultural Framework of College Persistence Wellness for Students on Academic Probation

By

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Dedication

For turtles and Wemberlys…
and all the folks who keep us keepin' on

Acknowledgements

This dissertation was made possible by the mentoring, encouragement, wonderments, and cheerleading of my academic chair, Dr. Alberta M. Gloria. Her patience during my doctoral journey will be remembered.

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It would be impossible to say enough about the unconditional support from my parents, brother, and sister. To answer your question, Bermoobians, “Yes, I am done!”

Abstract

Background

There is increased need for a college educated workforce that is prepared to enter high-demand, technical fields (e.g., science, technology, engineering, math, medicine). Universities continue to be held accountable for improving student retention and degree completion. This study sought to understand the cognitive and noncognitive barriers to degree persistence for students on academic probation and for racial/ethnic minority students. A psychosociocultural approach to college persistence wellness was used as a framework to investigate the college-going experiences of racial/ethnic minority undergraduates and students on academic probation. Four noncognitive indicators of persistence were hypothesized as predictive of persistence commitments: appraisals of and coping strategies for being on academic probation, social support for college from mentors, comfort in the cultural environments of college, and everyday awareness of and attention to the college environment.

Methods

A survey-based study was conducted at a large, predominantly white university in the Midwest. Participants were undergraduate college students currently enrolled in the university. Participants completed an online survey, and data was analyzed by academic probation status and by race/ethnicity (i.e., racial/ethnic minority students and non-minority students). Survey data was analyzed via descriptive, correlational, and predictive statistics.

Results and discussion

Analysis of the students-on-academic-probation responses indicated that more favorable degree and institution persistence commitments were predicted by the psychosociocultural

variable-set and were positively associated with the individual PSC variables: challenge-based stress appraisals, positive perceptions of mentoring, greater comfort in the college environment, and a greater degree of everyday mindful attention and awareness at college. For students on academic probation and racial/ethnic minority students, perceptions of the college environment had the largest unique predictive and correlational relationship with persistence commitments.

Conclusion

Universities can continue in efforts to enhance the noncognitive aspects of the college-going experiences for students on academic probation and for racial/ethnic minority students. Of unique importance is the need for universities to improve the cultural comfort of the college environment in order to facilitate students' more favorable persistence commitments and well-being during college.

Chapter I

Introduction

The issue of college student success and degree completion has been an important area of research in psychology and education for decades. Recently however, the issue reached the national spotlight when President Obama announced his campaign to significantly improve college access, funding, and degree attainment by the year 2020 (White House, 2009). More specifically, President Obama established a national goal of increasing the proportion of the population with a postsecondary degree from 42% (in the year 2008) to 60% (White House, 2009). The President linked the success of this campaign to the economic progress of the country and the ability to remain competitive globally. Kanter (2011) described the importance of the College Completion 2020 campaign best stating:

> President Obama and [Education] Secretary Duncan recognize that educational quality and equity are essential to our economic and social prosperity. They also see education as the civil-rights issue of our generation. It is the most reliable path out of poverty for millions of youth and adults (www.changemag.org).

In 2011, the Pell Institute for the Study of Opportunity in Higher Education published a report that gave a more detailed picture of the college attainment trends in the United States that shaped President Obama's College Completion 2020 campaign (Nichols, 2011). It was explained that in 2008 the percentage of American 25 to 34 year olds who had completed a two-year degree or higher was 42% percent (Nichols, 2011). When this figure is compared alongside thirty-six peer countries, the proportion of educated residents in the U.S. population placed the country in twelfth place globally (Nichols, 2011). To compare, Korea and Canada had the

highest percentages (58% and 56%, respectively), while Turkey and Brazil were the lowest ranked (15% and 11%, respectively; Nichols, 2011).

Links between education, employment, and earnings have been established consistently. For example, education beyond the high school level is necessary for obtaining employment in high-growth sectors (e.g., science, technology, engineering, math, and medicine, or STEMM) or positions that require specialized training (e.g., managerial; Carnevale, Smith, & Strohl, 2010; Holzer, 2011; Rothwell, 2012). Income and level of education also appear to be associated. For example, Carnevale et al. (2010) reported that "61 percent of middle class workers had postsecondary education and training" in the year 2007—as compared with 26% in 1970 (p. 3).

With increased attention toward improving national college completion rates, employment options, and income, it also remains important that researchers continue to investigate the factors that propel and/or hinder persistence-to-completion (e.g., academic achievement, self-beliefs, supportive relationships, college-environment comfort) for an increasingly diverse society (Ryan & Siebens, 2012). One of the potential obstacles to degree completion is satisfactory academic progress. Universities and colleges measure undergraduates' satisfactory academic progress in terms of two indicators: credits earned and grade point average (GPA). For example, some schools use a GPA cut-off that indicates satisfactory and unsatisfactory progress. Students with grades below the GPA cut-off are faced with school-determined consequences such as academic probation. Once on academic probation, students must meet certain requirements (e.g., increase GPA within one semester or academic year) or else be faced with more significant consequences (e.g., dismissal from a program of study or from the school). Thus, academic probation, as a consequence of unsatisfactory progress, may

become a significant barrier to students' persistence to degree completion (Tovar & Simon, 2006).

Additionally, although a more diverse student body has been entering college, academic achievement disparities (e.g., gaps in retention and graduation rates) exist between racial/ethnic groups (Aud et al., 2011; Berube, 2009; http://nces.ed.gov/). In the U.S. Census Bureau report, *Educational Attainment in the United States: 2009 Population Characteristics*, bachelor's degree attainment was lowest for persons who self-identified as Black or of Hispanic-origin (Ryan & Siebens, 2012). Additionally, in the book, *Minority Student Retention,* Seidman (2007) noted that "from all indications, there is still a continuing need for research and practice to help minority students persist through academic and personal goal attainment" (p. 2). Thus, it is important that researchers intentionally examine the general college-going experiences of R/EM students.

Taken together, an important area of investigation would be the persistence-to-completion experiences of R/EM students on academic probation. Additionally, research is needed that focuses on the potential barriers as well as the positive factors that promote persistence for these students. Next, the contextual background that informed this study is described.

Racial/ethnic Diversity in the U.S. and in Higher Education

In the U.S. Census Brief, *Overview of Race and Hispanic Origin: 2010,* Humes, Jones, and Ramirez (2011) "illustrated the nation's changing racial and ethnic diversity" (p. 22) by drawing attention to the ten-year growth rate (29%) of the racial/ethnic minority population (i.e., "something other than non-Hispanic White alone", p. 17) during the decade between the 2000 and 2010 Census. A review of U.S. educational attainment data also indicates increased degree completion (Bachelor's or higher) for racial/ethnic populations in the past two decades (i.e.,

when comparing degree attainment of 25-to-29 year olds for the years 1980 and 2011 (Condition of Education, 2012). More specifically, in *Condition of Education* (2012) it was reported that a larger proportion of Black and Hispanic populations obtained postsecondary degrees in 2011 than in 1980, albeit at lower rates than the White population. Further, it was reported that the college completion gaps between racial/ethnic minority groups (specifically, Blacks and Hispanics) and non-minority groups (i.e., Whites) not only continued but also broadened:

> From 1980 to 2011, the percentage of 25- to 29-year-olds who had attained a bachelor's degree or higher increased from 25 to 39 percent for Whites, from 12 to 20 percent for Blacks, and from 8 to 13 percent for Hispanics….Between 1980 and 2011, the gap in the attainment of a bachelor's degree or higher between Blacks and Whites increased from 13 to 19 percentage points, and the gap between Whites and Hispanics increased from 17 to 26 percentage points. (Condition of Education: Postsecondary, 2012, p. 114).

Given the racial/ethnic diversity of the U.S. as well as the academic attainment gaps between majority and minority racial/ethnic groups, it is important to increase understanding of college completion and persistence factors for R/EM persons in college. Increasing R/EM students' college success will help the nation fulfill the College Completion 2020 goals of college access and degree attainment. In addition, increasing educational attainment for racial/ethnic minority groups will create a larger proportion of the U.S. population who are prepared for careers in high-growth, high-paying sectors.

This chapter continues with a summary of the state of college degree attainment in the U.S. College degree attainment will be examined for a subset of the student population –under-represented racial/ethnic groups. A brief discussion of student and college accountability is provided. Then, an introduction to a psychosociocultural (PSC) approach to student success and college persistence of under-represented students is given. The PSC approach frames the study's

purpose, research questions, and hypotheses. The chapter concludes with a summary of the focus and goals for the study.

First, a brief overview of terminology is presented. Specifically, terms related to college students, colleges and universities, post-secondary degree completion, and race/ethnicity are defined.

Chapter Terminology

The term *students* will refer to persons attending post-high school, higher education institutions. The term *undergraduates* will follow the U.S. Department of Education definition which describes undergraduates as "a student enrolled in a program of study that is usually four, or sometimes five, academic years and that leads to a baccalaureate degree" (Federal Student Aid, 2011, p. 1~67). The term *colleges* will refer to postsecondary institutions of higher education generally, including 2-year and 4-year schools, whereas the term *universities* will refer specifically to bachelor-degree granting schools (i.e., 4-year schools). The term *completion* will refer to college degree attainment and will be used interchangeably with graduation. Additionally, the current study more specifically conceptualized *persistence-to-completion* as students' academic commitments regarding (a) enrollment for each subsequent academic semester and (b) engagement in the process or goal of completing a college degree program (Davidson, Beck, & Milligan, 2009). The term *racial/ethnic minority* (R/EM) will refer to U.S. population groups historically under-represented in higher education (e.g., African American, Southeast Asian, Other Asian, American Indian, Native Hawaiian, Hispanic/Latino(a); UW-Madison Data Digest, 2012).

Improving College Completion at the National Level

To increase the proportion of the population with postsecondary education and career training, President Obama has introduced a college completion campaign that includes several initiatives designed to increase pre-college preparation (e.g., Grad Nation), college affordability (e.g., increased Pell Grant budget), and degree completion (e.g., College Completion Tool Kit, American Graduation Initiative; White House, 2009). To increase college and university accountability in these areas, schools are being offered incentives for participating in the campaign and for achieving school-determined benchmarks (see American Graduation Initiative; White House, 2009).

There have been positive outcomes since President Obama announced the College Completion 2020 campaign. Data pertaining to university accountability (e.g., time-to-degree and graduation rates) has become relatively easy to locate (e.g., www.completecollege.org, www.collegeresults.org). Prospective students and their families can make application decisions based on this data. Universities can market their success when competing to hire new faculty or obtain funding from potential investors.

In contrast, some have reported on the slow progress toward increasing national rates of college degree attainment (e.g., Kelderman, 2010; Matthews, 2012). In response, several organizations have committed to improving policies and multi-sector accountability that will help facilitate the President's goals for College Completion 2020 (Kelderman, 2010). For example, the Lumina Foundation has proposed their own "Big Goal 2025" which seeks to increase to 60% the proportion of Americans with higher education training at any level (e.g., certificates, technical training, and community college degrees; Matthews, 2012).

The goal of increasing the rate of college degree attainment is a complex issue. Thus, it is important that scholars investigate the varied and inter-related factors that promote degree

attainment. Counseling psychologists, given their focus on strengths-based and wellness processes, can continue making valuable contributions in this area through research that examines the university-level and student-level factors that contribute to the college-going processes and success of culturally diverse students.

Defining and Measuring Student Success

Thus far, this introduction has described R/EM students' persistence-to-completion processes primarily in terms of academic achievement; however, a broader description of college success is warranted given the complexity of the issue of degree attainment (Allen, Suh, Gonzalez, & Yang, 2008; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007). For example, in *Piecing Together the Student Success Puzzle,* Kuh et al. (2007) recommended using a "broad, holistic definition of student success…. defined as academic achievement; engagement in educationally purposeful activities; satisfaction; acquisition of desired knowledge, skills, and competencies; persistence; and attainment of educational objectives" (p. 10).

Therefore, student success and persistence-to-completion are intertwined and will be described herein as *persistence wellness*. Persistence wellness will refer to the entire process of students' college-going experiences from entrance to graduation and will include two categories of student success indicators: (a) "traditional" (i.e., *cognitive*) variables such as academic achievement (i.e., grades, entry into major, enrollment status, and credits earned) and (b) *non-cognitive* variables such as stress coping, social support, and whether students "feel comfortable and affirmed in the learning environment" (Kuh et al., 2007, p. 8).

Factors Contributing to Student Success: Cognitive and Non-cognitive Indicators

A constellation of factors contribute to R/EM students' persistence wellness. As noted above, these factors can be grouped as cognitive (e.g., academic achievement) and non-cognitive

(e.g., psychological, social, and cultural). *Cognitive* indicators have been defined by Robbins et al. (2004) as "standardized academic achievement and aptitude tests and school-based academic performance" (p. 261). To determine whether students are making satisfactory academic progress, colleges and universities refer to data obtained from several cognitive measures (e.g., grade point average, credits earned, and time in college). Of these, grade point average (GPA) is one of the most important cognitive indicators used by universities. GPA is the primary determinant of academic standing, and satisfactory academic standing is required for continuous enrollment. Unsatisfactory academic standing (i.e., lower GPA) can lead to academic probation which may become a significant barrier to student persistence.

However when cognitive indicators alone are used to describe persistence, then a limited picture is created that neglects a broader range of influences interacting at both the student and environment levels to impact persistence wellness (Adebao, 2008; Allen et al., 2008; Robbins et al., 2004; Tovar & Simon, 2006). For example, Adebao (2008) stated that "many studies have confirmed that a combination of cognitive and non-cognitive measures, such as School Aptitude Test scores and psychosocial variables, better predict first-year grades of at-risk students than cognitive measures alone" (p. 17). Further, Tovar and Simon (2006) reported that for students on academic probation, "the core issue is more than a lack of knowledge that they need in order to succeed" (p. 559). For example, Allen et al. (2008) described a long history of students and their families being blamed for low pre-college academic attainment rates which has "pushed school influences to the background" (p. 222). Thus, research investigating the college success of R/EM students generally, and on probation more specifically, requires an overarching structure from which to approach the complexity of the issue and which includes cognitive and non-cognitive factors within the person and environment contexts (i.e., students and colleges/universities).

In counseling psychology, one such framework is the psychosociocultural (PSC) approach to academic persistence and wellness (e.g., Gloria & Rodriguez, 2000). The PSC approach provides a multicultural, positive psychology framework for examining inter-related cognitive and non-cognitive factors associated with undergraduate persistence wellness (e.g., academic achievement, positive self-efficacy beliefs, interpersonal support for college, and positive experiences in various domains of the college environment; see Gloria and colleagues). For these reasons, the PSC approach is a useful framework for the current study. As such, it serves to structure the purpose, literature review, research questions, and hypotheses for this study. The next section will briefly describe the PSC approach and the non-cognitive indicators that can be examined within the framework.

Psychosociocultural Approach to Persistence Wellness

As a meta-theory, a PSC-based approach to persistence wellness can be used to organize complex models of a variety of inter-related non-cognitive factors that independently and collectively propel college-going success and graduation for R/EM students (Castellanos & Gloria, 2007). Therefore, researchers have examined numerous constructs that fall within the psychological, social, and cultural dimensions of the framework (e.g., Dixon Rayle, Robinson Kurpius, & Arredondo, 2006; Gloria & Ho, 2003; Gloria, Robinson Kurpius, Hamilton, & Willson, 1999; Lin, 2011; Phouybanhdyt, 2011). *Psychological* dimension variables have included constructs that emphasize self-beliefs and perceptions such as self-esteem, college self-efficacy, and well-being. *Social* dimension variables have included constructs that address interpersonal connections and social relationships such as perceived support from friends, family, and mentors. *Cultural* dimension variables have included constructs emphasizing worldviews, cultural values, and beliefs such as ethnic identity, college climate, values

congruity, and college environment stress. The current study expanded upon PSC-based student success and persistence research in three ways:

- **Students on academic probation.** PSC-based research on the experiences of students on academic probation is in its earliest stages (see Phouybanhdyt, 2011). For the current study, it was determined that additional PSC-based research with students on academic probation, specifically with under-represented students, would provide a valuable contribution to the literature in light of the continued national agenda on improving college degree attainment. Although the current study examined the persistence wellness experiences of all students on probation, the experiences of racial/ethnic minority (R/EM) students was a specific area of focus.
- **Stress response processes.** Culturally-based stress coping processes have been examined via a PSC-based approach (Gloria et al., 2005; Gloria et al., 2009). However, it was determined that additional research was needed on the stress coping experiences of under-represented students on academic probation. As maintaining and achieving satisfactory academic progress can be a source of stress for students (and thus, a barrier to persistence wellness), academic probation was framed herein as a potentially significant source of stress. As with previous PSC-based studies that measured students' stress and coping, the current study situated the stress construct within the psychological dimension. Additionally, two aspects of the stress construct were examined: (a) students' appraisals of the stressfulness of being academic probation, and (b) the stress coping strategies used by students to respond to this specific stressor.
- **Mindfulness.** Mindfulness, or present-moment attention and awareness (Brown & Ryan, 2003; Kabat-Zinn, 2005), has been consistently associated with health and stress coping

(Kabat-Zinn, 2005). However, this researcher located only one published study pertaining specifically to the mindfulness experiences of R/EM college students (see Masuda et al., 2009). An initial review of the literature indicated that the proposed study would be the first to examine the construct of everyday mindfulness within a PSC approach to persistence. Additionally, although the primary intent of the study was to examine the experiences of students on academic probation, all participants (including those with satisfactory academic standing) completed the measure of mindfulness used herein.

Summary

This chapter introduced the national interest in and importance of improving college completion for undergraduates generally and for R/EM students specifically. The psychosociocultural (PSC) approach to student success and persistence was introduced as a useful framework for examining a constellation of cognitive (e.g., academic achievement) and non-cognitive (e.g., stress coping, mindfulness, social support, and cultural comfort) factors that together contribute to R/EM students' college experiences. The current study was designed to build upon the extant literature from psychology, higher education, and college student health by using a PSC-based framework to examine the persistence wellness experiences of R/EM students on academic probation.

The next chapter will summarize the literature that guided the development of the study. The chapter will begin by defining key terminology. Then a thorough and succinct discussion will be provided of the student development theory and research that led to the PSC meta-model. Each dimension of the PSC model will be defined and described in terms of the constructs and variables that have been examined thus far. Then the PSC-framework will be used to describe the model of persistence wellness hypothesized herein to propel the college success for R/EM

college students facing a specific stressor (i.e., academic probation). Finally, the chapter will conclude with the guiding research questions and related hypotheses.

Chapter II

Literature Review

This chapter begins with definitions of key terminology used throughout the chapter. Then the guiding research paradigm for the study is presented (i.e., multicultural optimal psychology). Next, student development theory and the extant research pertaining to undergraduate retention and persistence are summarized with an emphasis on the psychosociocultural approach to student success (Castellanos & Gloria, 2007; Gloria, 1993; Gloria & Rodriguez, 2000). The psychosociocultural constructs framing the current study are described (i.e., stress appraisals and coping strategies, mentoring for college, cultural comfort and everyday mindfulness). Then academic probation is discussed as a potential source of college stress, and in the context of PSC-based research may provide additional information about the persistence wellness of under-represented students. Finally, the chapter concludes with the study's research questions and related hypotheses.

Key Terminology

Three broad areas of terminology will be discussed for the purposes of describing college students in the context of the current study. These areas are multicultural diversity, academic standing, and college departure. First, *multicultural diversity* is described broadly, and then specific diversity descriptors that were important for this study are defined. Second, *academic standing* is defined in terms of (a) the basic requirements for satisfactory academic progress and (b) the consequences of unsatisfactory progress. Third, *student departure* from college is defined in terms of voluntary well as university-mandated leaving.

Multicultural diversity. A broad definition of multicultural diversity can include several descriptors, such as, race, ethnicity, racial/ethnic identity, sexual orientation, economic background, religious beliefs, age, military service, citizenship, geography, size, gender identity, and language. The current study used a more specific definition of diversity represented by the phrase, *under-represented students*. Under-represented students were defined as groups of persons who have historically entered and/or graduated from college (i.e., 4-year universities) at significantly lower rates than historical majority students. Specifically, this study focused on the college experiences of students under-represented in terms of racial/ethnic diversity. Thus, a definition of racial/ethnic diversity, as used herein, is described next.

Racial/ethnic diversity. Colleges and universities use the National Center for Education Statistics (NCES) guidelines for reporting the race and ethnicity of their students. Since 1997, NCES has used a two-part categorization of ethnicity and race. They clarify that "categories… are used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins" (IPEDS Glossary, n.d.). IPEDS uses two categories used to describe ethnicity: (a) Hispanic or Latino or (b) Not Hispanic or Latino. Additionally, IPEDS uses five categories to describe race: (a) American Indian or Alaska Native, (b) Asian, (c) Black or African American, (d) Native Hawaiian or other Pacific Islander, and (e) White.

With the IPEDS definitions in mind, the current study defined under-represented racial/ethnic minority (R/EM) groups in the context of predominantly White colleges and universities (PWCU), which have been defined as having a racial/ethnic majority of European American/Caucasian students (see Jones, Castellanos, & Cole, 2002; Gloria et al., 1999; Wei et al., 2011). More specifically, R/EM students were defined herein as: African American/ Black,

Latina/o American, Southeast Asian American (see Creighton, 2007 and Yeh, 2004), and Native American/ American Indian/ Pacific Islander (ALANA). When indicated in the literature, author-specific terminology used in describing race/ethnicity is included throughout this study. Additionally, the abbreviations *R/EM* and *ALANA* are used interchangeably.

Academic standing. Grades earned and credits completed are the primary cognitive indicators of academic standing, defined as the satisfactory or unsatisfactory progress of full-time, degree-seeking students. The grade point average (GPA) criteria for satisfactory standing vary by institution and/or departmental major. Students who maintain *satisfactory progress* are permitted to enroll for the subsequent semester; however, students with *unsatisfactory progress* typically face university actions, such as academic probation. Students placed on *academic probation* must return to satisfactory academic standing within a university- or program-determined amount of time. Not doing so results in additional academic consequences such as, strict probation and even dismissal from the university.

Student departure: voluntary and university-mandated. *Attrition* refers to the broadest indicator of student departure in terms of non-enrollment for a consecutive semester, whether voluntarily or as mandated by the educational institution (Berger & Lyon, 2005). *Voluntary departure* refers to a student-based decision to not enroll for a subsequent semester that may be intended as temporary or permanent (Berger & Lyon, 2005). Related terms include stopout, transfer, and withdraw. Students who *stopout*, are those who "temporarily withdraw from an institution or system" with intention to re-enter college at a later date (Berger & Lyon, 2005, p. 7). *Program transfer* students switch majors while remaining at the same university. *Institution transfer* students leave one university and enroll at a different university or college. These students may remain enrolled continuously or return to school post-stopout, and the initial

academic major may change or remain the same. Further, completion may or may not occur at the transfer institution (or at subsequent transfer institutions). Students who *withdraw* from college are described as departing from the pursuit of a postsecondary degree (Berger & Lyon, 2005).

University mandated departure has been described as stemming "primarily, though not necessarily, from insufficient levels of academic performance (poor grades) and/or from the breaking of established rules concerning proper social and academic behavior (e. g., student strikes, stealing exams, etc.)" (Tinto, 1975, p. 92). University actions that are taken in response to students' academic performance include academic probation and dismissal. *Academic probation* refers most generally to university action to make subsequent semester enrollment contingent upon a student's return to satisfactory academic standing. *Academic dismissal* refers to university action that either permanently or temporarily prohibits a student from further enrollment due to unsatisfactory academic standing (Berger & Lyon, 2005).

Research Paradigm: Multicultural Positive Psychology

This section provides a brief overview of multicultural psychology and positive psychology. The two perspectives are integrated and described as an important worldview for research investigating the college success and persistence experiences of ALANA students.

In 2000, APA published a special issue of *American Psychologist*, edited by Seligman and Csikszentmihalyi that focused on "the science of positive psychology." In their introduction to the issue, Seligman and Csikszentmihalyi (2000) proposed that shifting to a worldview of positive psychology would "reorient psychology back to its two neglected missions – making normal people stronger and more productive and making high human potential actual" (p. 8). The authors described two goals for positive psychology-oriented research. First, they contended

that research must examine the factors that are most conducive to a reduction in suffering and to increases in quality of life. Second, research must attend to lived values across cultures and developmental age. These research goals are similar to the perspectives of multicultural and counseling psychologists.

Emphasizing the similarities between multicultural and positive psychology perspectives, Lopez et al. (2006) noted that counseling psychology research has a history of examining culturally-contextualized strengths as well as areas for growth. For example, in an interview for the Microtraining series, *Leaders in the Field*, Dr. Joseph White noted that concepts currently attributed to traditional and positive psychology have origins in multicultural psychology:

> "…spirituality is coming back around, resilience is coming back around; these all started with ethnic psychology. Connectedness to others rather than individuality is coming back around…. And also we've brought the positive model into psychology because the ethnic psychologists said they weren't going to build a negative model of themselves." (Zalaquett & White, n.d.).

Lopez et al. (2002) described the recent emergence of positive psychology as an interdisciplinary movement toward models of "positive human diversity" (p. 703). Specifically they noted that "researchers and practitioners must remember that the societal and cultural context of life affects how individuals pursue identity development goals and happiness" (Lopez et al., 2002, p. 701). In their view, positive psychology can be defined as a worldview situated in the interaction between cognition, affect, interpersonal relationships, philosophy and spirituality, and coping behaviors. Similarly, Myers (1993) recommended that researchers use theories of optimal functioning which are culturally-contextualized in order to account for social, political, and historical factors that may hinder versus advance one's striving toward optimal functioning. Likewise, Lopez et al. (2006) recommended that psychologists working from a positive psychology framework remain aware of assumptions, histories, and the cultural context that

provide the foundations for psychological theory, research, and practice (see also APA Guidelines, 2003).

As such, this dissertation was grounded in a student development perspective that stems from a multicultural positive psychology orientation: the psychosociocultural (PSC) approach of college success, persistence, and wellness for R/EM students (e.g., Castellanos & Gloria, 2007; Gloria & Rodriguez, 2000). The PSC approach provides a framework for examining complex constructs and variables that (a) inform the *how* of R/EM students' persistence wellness (e.g., strengths, values, attitudes, thriving behaviors), and (b) interact between student and university cultural contexts to promote optimal development and academic success. The next section summarizes the key student development theories and conceptual models upon which the PSC framework was developed. Then a detailed description of the PSC approach is given.

Student Development: Persistence to Completion

Since at least the 1970s, the scholarship of student development, in the areas of retention and persistence, has shifted from a predominantly psychological focus emphasizing only the role of students, to a person-environment perspective where the role of the institution has become equally important (Tinto, 2006). For example, Tinto (2006) noted that "it is one thing to understand why students leave; it is another to know what institutions can do to help students stay and succeed" (p. 6; see also, Bensimon, 2005; Jones, Castellanos, & Cole, 2002). Further, as postsecondary education access has increased for R/EM students, student success scholars have emphasized the importance of understanding both the cognitive (e.g., academic achievement) and non-cognitive (e.g., positive self- beliefs and attitudes, social support, campus climate, goal commitment) predictors of persistence-to-completion that contribute to efforts geared toward

increasing equity in degree attainment (e.g., Castellanos & Gloria, 2007; Creighton, 2007; Sedlacek, 1993).

This section provides a brief summary of student development theories, models, and research that has focused on student-institution interactions and cognitive and non-cognitive factors. A more specific emphasis will be on the theory and research that have contributed most to the development of the psychosociocultural model of academic persistence (Castellanos & Gloria, 2007; Gloria, 1993; Gloria & Rodriguez, 2000).

Tinto's theory of student integration. Tinto has been credited with developing the social-psychological theoretical model of student integration and attrition (Terenzini, Lorang, & Pascarella, 1981; Wolf-Wendel, Ward, & Kenzie, 2009). Developed and initially researched in the 1970s, Tinto's model included three constructs thought to predict persistence or attrition: academic integration, social integration, and institution/ goal commitments (Terenzini, Lorang & Pascarella, 1981). Through this lens, Tinto defined *attrition* as a process that was "related directly to a student's level of integration in both the social and academic systems of the institution" (Terenzini & Pascarella, 1975, p.3).

Tinto's (1975) model had two primary emphases. First, *integration and commitments* were informed by factors that were internal and external to students as well as institutions. Pascarella and Terenzini (1980) noted that "student background characteristics and goal commitments influence not only how the student will perform in college, but also how he or she will interact with, and subsequently become integrated into, an institution's social and academic systems" (p. 61). Background characteristics might include pre-college and emerging "attitudes and beliefs" as well as students' behaviors such as "[adherence] to the structural rules and requirements of the institution – the institutional culture" (Wolf-Wendel et al., p. 414).

Second, Tinto (1975) hypothesized that integration and commitments interacted over time through "the academic and social systems of the college" and it was this *process of interaction* that contributed to departure or persistence decisions (Tinto, 1975). In sum, the primary hypothesis of the model was that students who felt more academically and socially connected to a university were also more likely to remain committed to the university and to college completion goals, and in turn more likely to retain commitments to persist toward degree completion.

One of the seminal publications to provide research support for the validation of Tinto's theory is by Pascarella & Terenzini (1980). To test the hypothesis that academic and social integration help reduce undergraduate attrition, the authors developed the Persistence/Voluntary Dropout Decisions Scale (P/VDD). The P/VDD is a five-subscale instrument designed to predict student persistence versus at-risk of departure. The social integration construct is measured via two subscales designed to assess students' perceptions of peer and faculty interaction quality (Pascarella & Terenzini, 1980). The academic integration construct is measured via two subscales designed to assess students' perceptions and attitudes toward their "academic performance and… level of intellectual development" (1980, p. 62). The commitments construct is measured via one subscale designed to assess students' postsecondary education goals and intentions to remain enrolled with the current school.

Pascarella and Terenzini's (1980) P/VDD development study helped establish support for Tinto's theory and for the P/VDD as an adequate research instrument as a proxy predictor of actual persistence and attrition. The P/VDD scores were found to be in the hypothesized directions and significant accuracy was reported for the correct identification of students who persisted versus students who chose not to re-enroll for the subsequent semester at the same

school. Additionally, the authors found support for the "utility of individual scales…in predicting persistence/dropout behavior" (Pascarella & Terenzini, 1980, p. 73). For example, a significant correlation was reported between faculty interactions, faculty concerns, and actual persistence. Pascarella and Terenzini have recommended that continued research examine the utility of the P/VDD as a theory-based assessment tool that could support early intervention with students at-risk for drop-out (1980).

Proponents of Tinto's theory have noted that his model provided one of the first explanations for college attrition, persistence, and completion that focused on: (a) the student-by-institution interaction, (b) retention as well as persistence, and (c) voluntary versus involuntary departure (Wolf-Wendel, Ward, & Kinzie, 2009). However, criticisms of and recommendations for strengthening Tinto's integration theory have been generated from cultural-historical perspectives. For example, a theory of persistence that hinges on whether or not students are able to integrate successfully into the university's cultural worldview can appear to require some groups of students (i.e., R/EM) to assimilate in order to successfully meet the university expectations that facilitate college completion (Wolf-Wendel et al., 2009). Even Tinto (1975) noted the lack of "information regarding the relationship between race and dropout from higher education…We simply do not know enough about the processes of interaction…[that] relate to differing patterns of academic and social integration" (p. 119). Additionally, Pascarella and Terenzini (1980) recommended that future research take more into account the "interactions between student characteristics and specific institutional experiences" (p. 73).

With these criticisms in mind, it is important to consider other theories of undergraduate retention, persistence, and departure that have contributed to the greater knowledge base about the interaction between students and their environments and the role of both cognitive and non-

cognitive factors in promoting student success. The next section provides a summary of the work of Astin, Chickering and Reisser, and Bean and Metzner.

Astin's theory of involvement. Astin developed a theory of involvement to explain college student success; involvement was defined as a student's behavioral effort in terms of time spent and energy directed toward social and academic tasks associated with college degree attainment (Wolf-Wendel et al., 2009). The concept of involvement was similar to *goal commitment* where time and energy on academic behaviors has been positively correlated with grades—and grades with persistence (Metzner & Bean, 1987). Wolf-Wendel et al. (2009) reported that student involvement has been consistently "linked via research to almost every positive outcome of college" (p. 412). However, they also recommend that future research based on Astin's theory be examined with under-represented students in order to establish cross-cultural validity of involvement as promoting of student success for all students (Wolf-Wendel et al., 2009).

Chickering and Reisser's model of developmental tasks. Chickering and Reisser (1994) proposed a psychosocial student-university interaction model of undergraduate success (see also, Evans et al., 1998). At the student-level, seven primary developmental tasks were hypothesized to inform academic success which include competence, managing emotions, autonomy and interdependence, mature relationships, meaningful identity, purpose, and integrity (Evans, 1998). At the university-level, seven institution factors were hypothesized to influence students' success: objectives and policies, school size and involvement, faculty roles, curriculum and learning assumptions, cultural diversity, active learning and teaching, interests and campus communities, cross-campus collaborative student services (Evans, 1998). Evans et al. (1998) recommended that at the very least the Chickering and Reisser developmental tasks model be

adapted to include a range of cultural identities (e.g., race, ethnicity, gender, sexual orientation) for a greater range of person-environment interactions across students and to what extent these interactions – when taken into account with cultural factors – impact developmental tasks.

Bean and Metzner's model of nontraditional student departure. Bean and Metzner have developed a person-environment interaction model of cognitive and non-cognitive factors to examine and explain nontraditional student retention and departure. They proposed a three-part definition of nontraditional students that was based on age (over 24), housing (living off-campus), and credits-per-semester (part-time status; Bean & Metzner, 1985; Metzner and Bean, 1987). The authors have based their conceptual framework in the work of Tinto, Pascarella and Terenzini, and Chickering. They have also hypothesized that several inter-related constructs (i.e., background descriptors and academic goals, GPA and academic behaviors, resources and responsibilities, social and psychological factors, and environment/socialization factors) individually and collectively contribute to nontraditional student departure intent and actual departure decisions.

Metzner and Bean (1987) tested and found support for their model of departure; with "29% of the variance in dropout" stemming from the variables in the model's constructs (p. 22). More specifically, when examining specifically the findings for the racial/ethnic minority participants, the four most significant outcomes and variables in the conceptual model were: (a) the academic outcome of college GPA, (b) the psychological outcome of academic stress, (c) the environment variable of outside encouragement, and (d) the social integration variable of school peers. These findings provide additional support for using a model of student persistence that takes into account the cognitive and non-cognitive factors that promote persistence for R/EM students. However, though Metzner and Bean identified cultural variables such as race/ethnicity

and gender as important student background variables, the authors mentioned these only briefly in relationship to the development of and early research using their conceptual model.

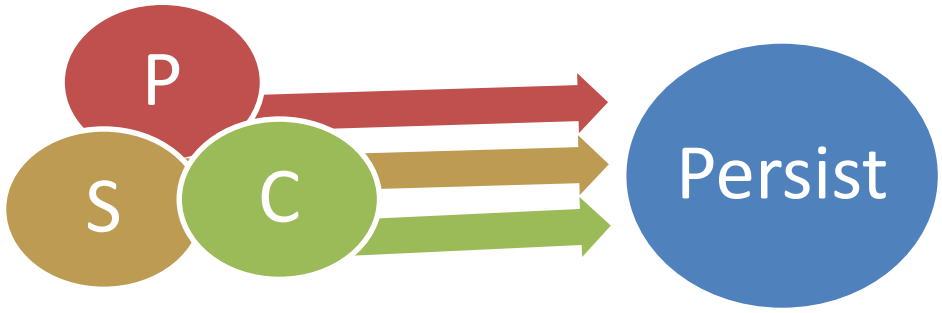
Section summary. Conceptual frameworks of student development that are based in person-environment interactions and cognitive and non-cognitive factors have generated significant research in describing college student persistence experiences. Critiques of these early theories and conceptual models have at least one commonality – a need for further culturally-grounded conceptualization and validation. The next section describes Gloria and colleague's psychosociocultural framework of college retention and persistence which emphasizes the integration of the psychological, social, and cultural contributors to the persistence experiences of R/EM students.

Gloria & Rodriguez' Psychosociocultural Framework of College Persistence Wellness

In 2000, Gloria and Rodriguez proposed a psychological, social, cultural (psychosociocultural) perspective of academic persistence (see also Castellanos & Gloria, 2007; Gloria, 1993). Gloria and Rodriguez (2000) described the psychosociocultural (PSC) perspective as an "integrated conceptual and contextual understanding of psychological, social, and cultural factors" (p. 146; see Figure 1). The PSC perspective has been used as a guiding framework for investigations into the college-going experiences of under-represented college students, particularly racial/ethnic minority undergraduates. Areas of research have included academic persistence and success (e.g., Castellanos & Gloria, 2007; Gloria & Ho, 2003; Gloria, Robinson Kurpius, Hamilton, & Willson, 1999; Phouybanhdyt, 2011; Tao, 2006), psychological well-being (Gloria et al., 2005; Gloria et al., 2009; Segura-Herrera, 2008), and cultural competence in college mental health services (Gloria & Rodriguez, 2000).

Figure 1.

Psychosociocultural Framework of College Persistence



The PSC framework shares some commonalities with previous theories of student persistence and departure. For example, there is an emphasis on the relationship between non-cognitive variables, academic achievement, and college persistence. Also, as a person-by-environment approach, the PSC perspective takes into account potential environment- and institutional-based barriers and supportive factors that contribute to student success. Further, the PSC framework can be used to examine departure as well as persistence. Too, the theoretical and conceptual models integrated within the PSC-based persistence framework include social cognitive theory and sociocultural and psychosocial student development theories (Gloria et al., 1999; Gloria & Rodriguez, 2000).

Developed originally to describe academic persistence experiences of Latina/o college students (Gloria & Rodriguez, 2000), the PSC model has continued to guide research "exploring the educational processes and coping strategies that facilitate academic persistence for students of color…in which the 'whole student' is considered within the context of the university environment" (http://counselingpsych.education.wisc.edu/cp/people/faculty/alberta-gloria). Through the "dynamic and interdependent" relationships of the three PSC dimensions, the model

provides a structure for examining inter-related theories and constructs that together as well as individually contribute to persistence (Gloria & Rodriquez, 2000, p. 146).

The PSC-framework also expands upon psychosocial models in several instrumental ways. First, it is grounded in a multicultural positive psychology worldview. As such, it provides a structure for examining and describing student strengths and challenges from a culturally-sensitive perspective. Second, the PSC-framework was originally developed for and has been tested extensively with racially/ethnically diverse undergraduates and has consistently examined the intersections of race/ethnicity with other social/cultural identities or descriptors, including: sex/gender diversity (Gloria et al., 2009; Tao, 2006; Nepomuceno, 2008) and socioeconomic diversity (e.g., Lin, 2011). Third, and perhaps most strikingly different from its predecessors, the PSC-framework includes a specific cultural dimension. For example, although Tinto discussed the role of congruence in persistence, his model did not include aspects of the cultural experience as a separate dimension (Castillo et al., 2006; Wei, Ku, & Liao, 2011). Thus, the cultural dimension makes an important contribution to student persistence conceptual frameworks. The dimension accounts for the constructs and variables pertaining to the relationship between student and college/university values and campus cultural climate that have been found to be especially important in the college success of ALANA students (Hurtado & Carter, 1997; Jones et al., 2002).

In sum, the PSC-based model of persistence, as an optimal psychology framework of student success and persistence-to-completion, is exceptional in its flexibility and utility for future research. Next, a summary of the psychological, social, and cultural dimensions is given. Then the specific constructs selected for use in the current study are described.

Psychological dimension. The psychological dimension encompasses student persistence constructs that pertain primarily to self-beliefs, feelings, and behaviors that contribute to the academic persistence of under-represented students. Several psychological constructs have been examined in PSC-based investigations and have been found to be associated with persistence, including: self-esteem (e.g., Gloria, Robinson Kurpius, Hamilton, & Willson, 1999), perceptions of barriers (Gloria, Castellanos, & Orozco, 2005; Gloria, Castellanos, Lopez, & Rosales, 2005), stress coping (e.g., Coffman & Gilligan, 2002), and college-setting self-efficacy (e.g., Robinson Kurpius et al., 2008).

Social dimension. The social dimension of the PSC approach includes constructs pertaining to students' perceptions of the interpersonal relationships that promote persistence. Procidano & Heller (1983) defined perceptions of support as "the extent to which an individual believes that his/her needs for support, information, and feedback are fulfilled" (p. 2). These supportive relationships may include persons either internal or external to the campus setting, such as: family, friends and peers, mentors, and university personnel.

Perceptions of social support have been positively associated with students' persistence-to-completion (Tinto, 2009) and a variety of non-cognitive factors, including: college self-efficacy (Bandura, 1986), problem-solving (Bordes et al., 2006), belongingness and university environment comfort (Gloria et al., 1999), and stress coping and well-being (Gloria & Rodriguez, 2000). For example, Bandura (1986) proposed that perceptions of social support from family, peers, and schools were important sources of social and cognitive self-efficacy development.

Further, researchers investigating the college experiences of R/EM undergraduates have also found consistent evidence of a positive association between social support and college

persistence (e.g., Bordes et al., 2006; Gloria & Ho, 2003; Gloria et al., 1999). For example, in a study with African American undergraduates, Gloria et al. (1999) stated that supportive relationships may help increase feelings of belongingness while easing "discomfort on predominantly White college campuses" (p. 258). The authors performed regression analyses to determine the variance in students' persistence beliefs based on PSC-approach constructs (i.e., psychological beliefs, social support, and cultural comfort) and individual variables within each construct (e.g., self-efficacy, mentor support, university environment perceptions). Of the three support variables measured (family, friends, and mentors), perceptions of support from mentors contributed most significantly. Similarly, in an article recommending culturally-congruent counseling services for Latina/o undergraduates, Gloria and Rodriguez (2000) recommended that mental health providers and other college personnel consider the construct of social support as a positive stress coping strategy that "facilitates psychological and physical well-being [Rodriguez, 1998]" for Latina/o students (p. 150). To further illustrate, Bordes et al. (2006) examined the college experiences of undergraduates (i.e., Latina/o and White students). The authors measured the social support construct in terms of three variables (i.e., family, friend, and mentor support). For the Latina/o sample, the social support construct "accounted for 32.5% of the variance in academic persistence decisions" (p. 74). Mentor and family support contributed significantly to the social support construct's predictability of persistence beliefs. The authors concluded that students' positive perceptions of social support were conducive to "help[ing] students resolve and progress through [college-setting] challenges or issues" (p. 66). These studies provide a solid rationale for including measures of social support in PSC-based studies investigating R/EM students' college persistence experiences.

Cultural dimension. The cultural dimension of the PSC framework encompasses college environment constructs that relate to persistence or departure (Gloria & Ho, 2003). Researchers have operationalized the cultural dimension via several constructs, including ethnic identity, acculturation, environment stress, cultural fit, and cultural comfort.

In a review of student retention research and practice literature, Tinto (2006) called for continued investigation of college environment factors that contribute to student efficacy beliefs, perceptions of support, and persistence-to-graduation. Tinto also recommended that colleges and universities evolve their worldview about retention and persistence to include not just student psychological factors but also social-environmental factors. For example, the author stated that some campus personnel (i.e., faculty) tend to attribute student departure primarily to students' "skills and motivation…[and] that they would not have a retention 'problem' if the admission office only admitted more qualified students" (Tinto, 2006, p. 9). To the degree that students are faced with this perspective during their college-going experiences, commitments to persist (at least with that institution), are likely to impact perceptions of fit and comfort in the university environment. Thus, comfort in the environment remains an important factor to include in PSC-based persistence wellness research.

In sum, as seen from this brief overview of extant literature, scientists from multiple disciplines have used the PSC framework as a starting point for theory-based, culturally-grounded examinations of college students' persistence. The current PSC-based study focused on five non-cognitive factors: a) stress appraisals, b) stress coping strategies, c) college-going support from mentors, d) college environment perceptions and comfort, and e) everyday mindfulness. Each construct is described next.

Psychological Construct: Stress Response Processes

The current study investigated the stress response processes utilized by R/EM students on academic probation. The stress response construct and its related variables are discussed next.

College stress. College attendance can be described as a series of experiences, some of which students perceive as stressful. Stressful college-setting experiences may contribute to college departure for some students. For example, Bray, Braxton, and Sullivan (1999) noted that "from a psychological perspective, students that depart from an institution are those that refuse to or are unable to change either themselves or their environments" (p. 655). However, Utsey et al. (2000) emphasized that evaluations of stress coping must include factors such as "the stress associated with the experience of everyday racism" at the individual, institutional, and cultural levels (p. 72). The authors provided an especially important reminder for psychological research that is person-centered rather than socially, culturally, and politically centered:

> Given that racism is an invidious and omnipresent stressor in the lives of many African Americans, research aimed at delineating those coping behaviors that effectively ameliorate its potentially harmful psychological and somatic consequences is warranted. However, this is not to suggest that the elimination of racism should not be pursued. (Utsey et al., 2000, p. 72).

Thus, it is important that researchers continue to examine college stress in relationship to ALANA persistence and degree completion. Further, because the stress response process is intertwined with self-beliefs, resources, and environment factors, it is easy to see its relevance within a PSC approach to persistence wellness.

The stress response process within the PSC approach. The definition of college stress used herein stems from the work of Muñoz (1986) who compared the stress experiences of Mexican-American (Chicana/o) and Euro-American (Anglo) undergraduates. Muñoz defined stress as 'the adjustive demands made upon the individual…to the problems in living with which he must cope if he is to meet his needs' (as cited in Coleman, 1976, p. 131). Thus, for the current

study the college-going stress response process of R/EM students was defined as the process of responding to college-life demands (e.g., satisfactory academic progress, physical and mental health, family and peer relationships) in order to meet one's college-related goals (e.g., college completion generally, and more specifically, a healthy college experience that helps propel personal and career development).

Some PSC-based investigations have already examined stress response processes within the context of R/EM students' college experiences (see Gloria et al., 2005; Gloria et al., 2009). For example, Gloria et al. (2005) investigated the psychological well-being of Latina female students four non-cognitive variables in their study: perceived barriers, cultural fit, cultural comfort, and stress coping. Three types of coping were significantly and positively correlated with psychological well-being: planned action, cultural-group support, and learning from past experiences. Additionally, planned action and cultural comfort were positively correlated. The authors concluded that "positive perceptions may, in part, explain Latina willingness to stay in a system where they perceive barriers and experience cultural incongruity" (p. 175).

In a similar study, Gloria et al. (2009) examined the psychological well-being of Latino male undergraduates. The study was an especially important contribution to the literature because it was the first "sex- and race-specific empirical investigation…of male Latino undergraduates' coping and well-being" (p. 322). The non-cognitive predictor variables included self-esteem, perceived barriers to persistence, cultural fit and comfort, and coping strategies. The authors reported that two most frequently endorsed coping strategies used by Latino males in their sample were planned action and learning from past experiences (Gloria et al., 2009). Additionally, a positive correlation was found between perceptions of the environment and problem-focused coping strategies. Of the two coping strategy categories measured (problem-

and emotion-focused), both were significantly and positively correlated with the criterion variable (psychological well-being); however, the correlation coefficient for problem-focused coping was larger. These findings were similar to the results reported for Latina female students (Gloria et al., 2005). Taken together, these studies supported the rationale for extending the examination of stress response processes to PSC-based investigations of the college experiences of other R/EM groups.

Gloria et al. (2009) provided two recommendations for stress-coping research with R/EM undergraduates. First, the authors suggested that investigators operationalize stress coping through "a more dimensionalized and time-focused approach to understand how stressors influence students' coping responses" (Gloria et al., 2009, p. 334). Second, the authors recommended that studies examine the relationship between sources of stress and the types of coping employed in order to "help determine how [students] would or have coped with the situation and their related emotional reactions (e.g., sense of empowerment, confidence, frustration, anger)" (Gloria et al., 2009, p. 335).

The current study was grounded in the extant literature pertaining to PSC-based approaches to persistence wellness that included the stress construct. It was thought that additional research pertaining to the stress response processes of R/EM college students would help describe the dynamic relationship between culturally-defined stressors and coping, supportive relationships, and cultural comfort. The current study provided an expansion to existing PSC-based college student stress research in four ways. First, a greater range of the stress response process was examined (i.e., stressor appraisal as well as stress coping behaviors). Second, a broad population of racial/ethnic minority students (e.g., African American, Latina/o, Southeast Asian American, Native American) was included. Third, academic probation—a

stressor related to unsatisfactory academic progress—was defined as a potential risk factor/ barrier to persistence-to-college completion for some students. Finally, a culturally-contextualized model of the stress construct (e.g., Wong's resource-congruence model) was selected as a useful framework for addressing the recommendations put forth by Gloria et al. (2009).

The next section summarizes stress process theory, conceptual models, and research most relevant to the current study. Because the stress response-related literature is extensive and multidisciplinary, the summary will emphasize theory and research grounded in multicultural psychology, college student stress, and/or is broadly considered a gold standard for theory-based stress process research. Additionally, college-setting stress process factors will be situated within the PSC-based framework of persistence wellness for R/EM students.

Optimal and suboptimal stress.

> "There is an optimal level of stress under which people function up to their abilities, and this varies from person to person" (Slavin et al., 1991, p. 158).
>
> "No one can claim immunity from life's problems, but everyone can learn how to be more effective in coping" (Wong, 1993, p. 51).

Myers (1979) described two different types of stress: growth-producing stress and pain/illness-producing stress. Growth-producing stress "is felt to result when the demand for change is within the organism's normal adaptational capabilities but sufficiently novel and demanding to require some efforts to change"; however, damaging stress "results when the adaptational capabilities of the organism are overwhelmed and defense and survival become the themes for action" (Myers, 1979, p. 4). Within this context, suboptimal stress may then occur when a person is faced with a threatening stressor which is perceived to require the activation of coping resources; yet, the range of or access to existing coping resources are perceived to be or

eventually experienced as insufficient for health-promoting and/or goal-enhancing outcomes. It is also important to note that stress experiences are not inherently bad or negative. People can develop a range of more optimal prevention and intervention responses that match the stressor and coping context and are also deemed to be culturally-congruent. The conceptual models that framed the stress response constructs used herein are described next.

Conceptual frameworks of stress response processes. The human *stress response* has been defined as a universal, multistep, cyclical *process* that includes the identification of and response to stressors (Lazarus & Folkman, 1984; Slavin et al., 1991; Wong, 1993). Wong (1993) further defined the stress response as the experience of a "problematic internal or external condition that creates tension/upset in the individual and calls for some form of coping" (Wong, 1993). Although all humans may engage in stress response processes (e.g., appraisal of and coping with stressors), several researchers have emphasized the importance for models of stress responding to be sensitive to the psychological, social, cultural, historical, and/or economic factors that may inform the stress process cycle (see Outlaw, 1993; Slavin et al., 1991; Utsey, Adams, & Bolden).

Lazarus and Folkman's Ways of Coping. Lazarus and Folkman (1984, 1988) developed one of the most cited and investigated stress response process models used in psychological research. Based on a cognitive-behavioral psychology perspective, Lazarus and Folkman proposed a 5-component, cyclical stress response process activated when an "individual undertakes to manage demands which are perceived as taxing his/her resources" (Mantzicopoulos, 1997). The five components of Lazarus and Folkman's *Ways of Coping* model were (a) primary appraisal - identification of a stressor, (b) secondary appraisal - stress severity,

(c) consideration of coping options, (d) implementation of coping strategies, and (e) evaluation of coping outcomes (Wong et al., 2006).

Criticisms of and recommendations for the Ways of Coping model. One consistent criticism of the Lazarus and Folkman (1984) framework has been that it must be broadened to include the cultural factors that may shape the labeling of events as stressful and the strategies employed for responding to events appraised to be stressors may vary in relationship to cultural and other contextual factors (e.g., Slavin et al., 1991). Thus, researchers have made several recommendations for increasing the validity of Lazarus and Folkman's model with racial/ethnic minority populations (e.g., Slavin et al., 1991; Outlaw, 1993). For example, Slavin et al. (1991) hypothesized several culturally-based extensions to Lazarus and Folkman's Ways of Coping framework. The authors noted that stress occurrences, appraisals, coping, and adaptation vary by a variety of psychological, political, historical, and sociocultural factors. Specifically they proposed several recommendations for expanding the Ways of Coping model in order to "highlight the essential social embeddedness of each individual" (Slavin et al., 1991, p. 158). These recommendations included six "culture-relevant dimensions" of the stress process: (a) hierarchies of power, (b) financial support, (c) education/training, (d) institutional support, (e) social/emotional support, and (f) individual factors such as confidence (1991, p.156).

Stress response processes: appraisal and coping. In this section, the five components of the Lazarus and Folkman (1984) model will serve as an organizational framework from which to define the stress response constructs used in the current study (i.e., appraisal and coping). A broad range of culturally-aware factors (e.g., psychological, social, historical, economic) in the stress response process will be integrated throughout.

Primary appraisal: stressor identification. In the Lazarus and Folkman model, stress appraisal was a two-step process "concerned with assessing whether we have a problem on hand and how serious it is…what kind of problem is it? What can be done about it? Is it within my control?" (Wong, 1993, p. 56). At the first level of appraisal, a person determines whether or not to label an event or experience (internal or external, experienced directly or observed) as stress. An event is labeled as stress when it requires a person to respond with coping resources (Myers, 1979).

Social experiences and political history may impact stressor identification (Myers, 1979). To account for this, Slavin et al. (1991) recommended that stressor identification also be described in terms of frequency, chronicity, and source. *Frequency* refers to the number of times in which a person defines a particular event or constellation of events as a stressor. *Chronicity* is defined as the duration of time in which a particular event is experienced as a stressor. *Source* is defined as the root of the problem from where a stress event stems.

Researchers have identified several common sources of college student stress, including: academic concerns (e.g., Feldt, 2008; Neely, Schallert, Mohammed, Roberts, & Chen, 2009), personal and family relationships (e.g., Feldt, 2008), and finances (e.g., Feldt, 2008). However, unique stressors may exist for under-represented students. For example, in an investigation of the stressors and coping practices of Black and Latina/o undergraduates, Chiang, Hunter, and Yeh (2004) found that the top academic stressors and stress management concerns as "maintaining enrollment, grades, emotional adjustment, and physical health" (p. 794). Also, Gloria et al. (2005) noted that racial/ethnic minority students attending PWCUs "often have a greater prevalence of…environmental and situational stressors associated with being a cultural minority" (p. 177; see also Creighton, 2007 and Jones, Castellanos, & Cole, 2002). Thus, this study sought

to continue investigating the associations between stress, campus climate, and persistence. The next section defines and summarizes the second level of appraisal: severity of stress.

Secondary appraisal: stressfulness severity. Lazarus and Folkman (1984) defined the second level of appraisal as a determination of the severity of stress experienced or anticipated. In their model, severity appraisals "include harm/loss, threat, and challenge" (p. 32). Events appraised as a threat or loss were hypothesized to be more stressful than events appraised as challenging. This distinction is important, because challenge-appraised events are more often accompanied with the perception that one either has or can locate and activate resources to manage the challenge.

Situated from the perspective of nursing, and to account for the history of race-based discrimination as well as current racism-events experienced by African Americans, Outlaw (1993) made research and practice recommendations pertaining to the cognitive appraisal component of the Lazarus and Folkman stress coping process. Specifically, Outlaw (1993) recommended that researchers continue examining "what factors influence some African Americans to appraise situations at the harm/loss or threat level, whereas others appraise the same situation at the challenge level" (p. 406). Outlaw's recommendation related directly to the persistence wellness model investigated herein. Specifically, this study sought to examine the relationship between students' appraisals of academic probation (e.g., threat vs. challenge) and their persistence commitments.

Stress coping: resource assessment. In the third stage of the stress response process, a person reviews the availability, appropriateness, and potential success of resources that can be used to help respond to and manage the identified stressor. Resources are defined as "the devices and means of supply that can be drawn on in times of need" (Wong, 1993, p. 58). The resources

may be located from within the person (e.g., psychological coping resources) or located externally (e.g., interpersonal coping resources).

Wong (1993) recommended several strategies for cultivating stress resilience and coping resources that are especially relevant for the higher education settings generally and for R/EM students specifically. First, to increase resources, Wong (1993) recommended that people "foster a sense of mastery while recognizing external constraints and internal limitations", "explore sources of personal meaning", and "cultivate our capacity for dreaming and hoping" (p. 59). Second, to reduce deficits, Wong (1993) suggested that people "work on personal life history and replace irrational beliefs with more adaptive schemas" (p. 59). The current PSC-based study of stress response processes was designed to provide additional information about the relationship between persistence and stress coping resources.

Stress coping: Response focus, strategies, and style. Lazarus and Folkman (1984) defined stress coping as the implementation of "efforts to manage stressful demands, regardless of outcome" (p. 134). Wong (1993) expanded upon this definition and described coping as a response to an identified stressor where coping is a person's "attempt to resolve the problem and restore the balance; it consists of a combination of behavioural, cognitive, psychodynamic and physiological responses to remove the tension or threat" (p. 56). Wong (1993) defined *effective* coping as "flexible, creative and resourceful in that good use is made of available resources", whether internal or external (p. 58).

Wong (1993) commended Lazarus and Folkman (1984) for their important contributions to stress coping, and noted that their work "led to the examination of emotion-focused and problem-focused coping strategies" (p. 57). However, a review of the literature led to culturally-specific approaches to coping and investigations taking into consideration individual, contextual,

and cultural factors that inform stress coping strategies and styles (Myers, 1979; Outlaw, 1993; Utsey et al, 2000). For example, Myers (1979) identified several person-level factors influential in stress coping responses, including “motivation for change; available skills to meet the demand; attitudes and beliefs about self and the environment and one’s ability to cope; the person’s world view’ and finally, past coping history” (p. 6). Further, Wong, Reker, and Peacock (2006) stated that stress coping efforts are “essential to surviving and thriving in a rapidly changing and highly competitive global village” (p. 223). Similarly, Gloria et al. (2009) noted that PSC-based research examining the relationship between R/EM persistence and college-setting stress is limited. For example, “despite the abundance of literature implicating challenges and stressful experiences of Latina/o undergraduates, the manner in which they cope with Psychosociocultural stressors has received little scholarly attention” (Gloria et al., 2009, p. 320). Thus, the current study sought to provide additional information on the stress coping responses of ALANA college students.

Outcome evaluation. In the fifth component of the Lazarus and Folkman (1984) framework, a person engages in a review of coping outcomes. Upon review of the coping process, a person evaluates the accuracy of their stress identification and appraisal, selection of responses, and effectiveness of responses. The degree of stress is re-appraised and the stress coping process may begin again as needed. When the coping response has been evaluated as successful, there can be an increased likeliness for a person to respond similarly to future stress events. This can work for or against a person’s larger goals. For example, avoidant coping may be experienced as effective in the short-term, but may not facilitate goal achievement in the long run. However, if the stress coping process has been evaluated as efficacious in terms of stress

management and goal achievement, then similar future events may be appraised as challenging (rather than threatening) and therefore more manageable.

Resource-congruence model of stress coping. Building upon the Lazarus and Folkman (1984) framework of stress response processes, Wong and colleagues sought to develop a more culturally-contextualized framework of stress coping which they called the resource-congruence model (Wong, 1993; Wong et al., 2006). They asserted that optimal stress coping occurs when people consider the appropriateness and availability of previously effective as well as potentially new coping strategies. Further, stressors with varying sources, contexts, and degrees of stressfulness may require variations in a person's stress response style and selection of strategies (Wong et al., 2006). Thus, the authors introduced "creative coping" into the stress coping process and identified numerous coping categories (e.g., proactive, collective, creative, existential and spiritual strategies) that may be effective for preventing future and/or responding to current problematic stress (Wong, 1993, p. 58).

In the resource-congruence model, *congruence* was defined as "the matching between various types of stressors and coping strategies" (Wong, 1993, p. 58). Further, Wong (1993) stated that people tend to select "appropriate strategies on the basis of available resources and cultural knowledge" (Wong, 1993, p. 58). Additionally, the evaluation of coping outcomes was examined through several 'indices of effective coping', including "efficacy in achieving the desired goal of removing stress and restoring balance" (Wong, 1993, p. 58).

In the resource-congruence model of creative, proactive, and responsive stress coping, three key factors were proposed "as guidelines on effective coping and resourcefulness": congruence, resource availability, and self-restructuring (Wong et al., 2006, p. 271). A *congruent coping response* "matches the nature of the stressor" and one's "cultural values and practices"

(Wong et al., 2006, p. 271). *Resource availability* and development usually means that a person will have a greater number and variety of coping strategies to choose from. This can lead to greater ability to engage in more "preventive and transformative coping" as well as more effective responsive/ reactive coping (Wong et al., 2006, p. 271). *Self-restructuring* can help promote resilience, even when other types of resources are limited.

Wong et al. (2006) developed and tested a stress coping instrument (Revised-Coping Strategies Inventory) based on the resource-congruence model. Expanding upon several popular coping strategies assessment instruments, the authors added strategy categories (existential, self-restructuring, tension reduction) and styles (transformational) that were rarely or had never been included previously. The authors stated that "effective coping with a variety of stressors requires a large repertoire of coping strategies" (Wong, 2006, p. 241). They described successful coping as the ability to "adapt effectively and creatively" (Wong, 2006, p. 267). For example, they found support for a positive relationship between decreased stress and a coping strategy labeled "Acceptance" where "acceptance simply means accepting the situation as unchangeable, but it does not imply resignation, because one can still engage in Meaning-making, Self-restructuring and Tension-reduction rather than giving up" (Wong, 2006, p. 267). The authors concluded that their instrument, the Revised-Coping Schemas Inventory, would be a useful measure for continued stress coping research with diverse populations.

Wong et al. (2006) recommended that future stress coping research "hold the stressor constant across cultures and ask equivalent samples what the most typical and appropriate way of coping with this kind of stressor would be. This would allow researchers to identify both universal and cultural-specific aspects of coping prototypes" (Wong et al., 2006, p. 270). As

such, the current study held constant one potential stressor deemed important in undergraduate persistence wellness: being on academic probation.

Section Summary. Students respond to a variety of daily life demands, including those that are related to college education. It was not within the scope of this study to account for all of these roles, demands, and choices. Instead, the study aimed to examine college-related experiences pertaining specifically to one college-setting stressor: being on academic probation. To expand upon existing knowledge about R/EM students' persistence wellness, this study used a culturally-grounded stress response process model to examine the stress appraisal and coping responses of R/EM students on academic probation.

The next section describes the social-dimension variable included in the current study. One variable, mentoring support, was included.

Social Construct: College-Going Mentoring Support

Within the PSC approach, mentors are defined as non-family persons who "show [students] the ropes, answer questions, or help them feel less alone on campus" (Gloria & Rodriguez, 2000, p. 150). Positive experiences with campus and off-campus mentors can contribute to perceptions of the college environment and influence persistence decisions (Bordes et al., 2006; Gloria et al., 1999; Gloria & Ho, 2003). For Latina/o undergraduates, Gloria and Rodriguez (2000) stated that "students who have a mentor who takes personal and academic interest in their educational experiences are more likely to succeed" and that mentors help "[supplement] each student's need to create a comfortable academic environment" (p. 151). This was supported by Bordes and Arredondo (2005) who examined the relationship between mentoring and environment perceptions for Latina/o first year undergraduates. The authors found evidence of a significant positive relationship "between perceptions of the university

environment and perceptions of having a mentor" (Bordes & Arredondo, 2005, p. 125). In another example, Dixon Rayle et al. (2006) examined the contributions of self-beliefs, social support, and comfort in the academic achievement and persistence of a racially/ethnically diverse sample of first-year female undergraduates. The authors also found significant support of a positive relationship between perceptions of mentoring and perceptions of the university environment. Thus, even for students who experience a lesser degree of college environment comfort, social support may help propel persistence.

The next section defines and describes the cultural dimension variables used in the current study. The non-cognitive variables selected were cultural comfort and everyday mindfulness. Each is described in turn.

Cultural Constructs: Comfort and Mindfulness.

Perceptions of and comfort in the college environment. Within the context of the PSC approach, *cultural comfort* is defined as students' perceptions of belongingness, acknowledgement, and acceptance throughout the college setting such as interacting with faculty and staff, in-class experiences, and other campus community experiences (Gloria & Robinson Kurpius, 1996). Emphasizing the importance of non-cognitive cultural-dimension factors, Stephens et al. (2012) stated that "when a given context is self-relevant, students will experience greater psychological well-being, will be more academically identified or engaged with the setting, and ultimately, will perform better" (p. 3).

For R/EM students attending PWCUs, researchers using a PSC approach have consistently reported a significant relationship between cultural comfort and persistence beliefs (e.g., Gloria et al., 1999; Gloria & Ho, 2003; Gloria & Robinson Kurpius, 2001), indicating that more positive experiences in the college environment are conducive to persistence wellness.

More specifically, students' management of and response to cultural discomfort plays an important role in the persistence wellness of R/EM students (Gloria & Rodriguez, 2000).

Everyday Mindfulness. The second cultural-dimension construct selected for inclusion in the current study was everyday mindfulness. Numerous authors have observed a recent trend in modern Western psychological science and practice of a Buddhism-based construct of mindfulness being investigated via diverse research methodologies and incorporated into a variety of clinical interventions. (e.g. Bishop et al., 2004; Wallace & Shapiro, 2006). Wallace and Shapiro (2006) offered an explanation for the increased popularity of mindfulness in their assertion that Buddhism-based conceptualizations of mindfulness "can be relevant to philosophical and psychological theory and practice because of its intensive exploration of the mind and its psychological methods to cultivate sustained well-being" (p. 690). Additionally, the authors acknowledged that both Buddhist practices as well as the relatively recent emergence of positive psychology have a shared focus on "the cultivation of meaningful priorities, attitudes, perspectives and behaviors" (Wallace & Shapiro, 2006, p. 692). Wallace and Shapiro (2006) identified *balanced mind* as a way of increasing one's sense of freedom from "psychological distress, even in the face of adversity…often catalyzed by environmental and social influences" (Wallace & Shapiro, 2006, p. 693). The authors suggested that *balanced mind* is thus promoting of healthy "intentions, goals, and priorities" (Wallace & Shapiro, 2006, p. 693)."

As such, the concept of *balanced mind* was extended herein to persistence wellness and the college-going experiences of students on academic probation. Specifically, *balanced mind*—described here as everyday mindfulness--would be facilitative of college persistence for students on academic probation through the intersecting relationships of everyday mindfulness and the other PSC constructs examined in model. The next section further situates everyday mindfulness

within the current study. Everyday mindfulness is defined, and research examining mindfulness with college students is summarized. Finally, the relationships between mindfulness and the other PSC-model constructs investigated in the current study (i.e., stress response processes, supportive mentoring, and cultural comfort) are discussed.

Defining everyday mindfulness.

> "Mindfulness is a subtle process that you are using at this very moment" (Gunaratana, 2011, p. 131).

Jon Kabat-Zinn, who developed one of the most researched mindfulness-centered intervention programs (i.e., Mindfulness Based Stress Reduction or *MBSR*), has defined mindfulness as moment-to-moment awareness and attention (1990). He proposed seven inter-related attitudes that are facilitative of mindfulness, "non-judging, patience, a beginner's mind, trust, non-striving, acceptance, and letting go" (1990, p. 32). Researchers examining mindfulness-based practices (e.g., insight meditation) and interventions (e.g., the MBSR program) have reported positive associations between mindfulness and mind/body health (Bishop et al., 2004; Brown, Ryan, & Creswell, 2007).

Brown and Ryan (2003) examined mindfulness in yet another way—as a dispositional quality. The authors defined mindfulness as "a quality of consciousness" (p. 823) where "an enhanced attention to and awareness of current experience or present reality" (p.822) is combined with "an open, undivided observation of what is occurring both internally and externally" (p. 823). They stated that "present-centered attention-awareness is, in our view, foundational to mindfulness" (p. 824). Brown and Ryan's definition of mindfulness emphasized the potential for dispositional mindfulness to activate self-regulated thoughts, feelings, and behaviors that optimize one's ability to meet needs and respond to one's values.

Bishop et al. (2004) similarly defined mindfulness through a dispositional-lens. The authors operationalized mindfulness as both "self-regulation of attention" and an "orientation toward one's experiences in the present moment, an orientation that is characterized by curiosity, openness, and acceptance" (p. 232). Bishop et al. (2004) further described mindfulness as "a mode of awareness…not limited to meditation" (p. 234). Especially pertinent to this study is Bishop et al.'s (2004) assertion that "attention can be regulated to evoke mindfulness in many situations, thus allowing the student to respond skillfully to situations that provoke emotional reactions" (p. 234).

Additional research is needed on the role of informal, everyday mindfulness in the college setting. More specific to this study, research is needed that (a) explores the relationship between everyday mindfulness and college persistence, and (b) examines everyday mindfulness and populations under-represented in mindfulness literature (e.g., racial/ethnic minority groups).

Brown and Ryan (2003) recommended that future research pertaining to the construct of mindfulness attempt to describe "what psychological and social conditions support and hinder its dispositional and state level, or momentary expression" (p. 844). For example, they described mindfulness as positively associated with interpersonal experiences, where "mindfulness may facilitate…behavioral options" that promote responding rather than automatic reacting (Brown & Ryan, 2003, p. 844, citing Shapiro & Schwartz, 1999).

Thus, the construct of everyday mindfulness is relevant for the current study, especially pertaining to the situation of academic probation, perceptions of mentoring, and experiences of the college environment. First, scholars of mindfulness have emphasized the important relationship between mindfulness and stress processes. Shapiro et al. (2006) stated that when people are "consciously (intention) bringing awareness (attention) and acceptance (attitude) to

experience in the present moment, we will be better able to use a wider, more adaptive range of coping skills" (p. 380). As such, it was hypothesized herein that everyday mindfulness would serve to help students manage a range of emotional reactions (stress appraisals) in such a way that appraisal-based and resource-congruent coping strategies would be activated (skillful responding) and persistence commitments sustained for the purposes of degree completion. Additionally, with social support being both a resource for coping as well as an individual predictor of persistence, it was hypothesized that students with a greater sense of everyday mindfulness would be more aware of and therefore have more positive perceptions of social support resources (i.e., mentoring for college). Finally, everyday mindfulness was thought to be associated with students' sense of belongingness and comfort in the college setting. With increased awareness and attention, students would likely have greater self-knowledge in relation to the college setting. This self-within-college awareness was thought subsequently to contribute to students' stress appraisals, perceptions of availability of resources, and the selection of coping strategies congruent to these appraisals, perceptions, and resources.

By examining these relationships within the context of the college-going experiences of marginalized student groups (i.e., R/EM students, or students on academic probation), additional information would be gleaned pertaining to how students manage the "psychic energy" required to negotiate difficult, often unwelcoming college environments (Gloria & Rodriguez, 2000, p. 147). For example, Oades, Robinson, Green, and Spence (2011) stated that although universities have created "cultures of excellence and peak performance" they also "report significant student dropout rates and levels of psychological distress" (p. 432). Oades et al. (2011) highlighted the many contributing factors to the development of less-positive university environments (e.g., significant focus on cognitive indicators of academic success, and performance expectations

detrimental to physical health and personal well-being). The *cultivation of mindfulness* was one of several recommendations made by Oades et al. (2011) regarding ways in which universities could begin to develop a strengths-based and healthier culture that strives to "increase positive emotions, meaning and engagement and decrease mental illness (e.g., stress, depression and anxiety)" (p. 432). Thus, in sum, the inclusion of everyday mindfulness within a PSC-based approach to research examining academic persistence wellness provided a new lens from which to examine the college-going experiences of R/EM students and students on academic probation. Further, the cultural dimension of the PSC-framework was the appropriate placement for the construct of everyday mindfulness in this study as it was seen to best capture students' experiences of attention and awareness to their experiences within the college cultural environment.

The next section describes the outcome construct examined in the current study: college persistence commitments.

Persistence Wellness and Students' Commitments to Degree and Institution

The outcome construct examined in this study was college persistence—as measured by students' persistence commitments. More specifically, persistence commitments were examined in terms of students' thoughts and attitudes regarding persistence in terms of degree, goal, and institution commitments to persist, which together serve as a proxy for actual persistence behaviors (i.e., enrollment for subsequent terms). The rationale for investigating persistence in this way stemmed from the investigations of Pascarella and Terenzini (1980) and Davidson, Beck, and Milligan (2009). These authors developed and tested measures of persistence that included several factors (e.g., academic and social integration, degree and institution commitments) and found support for the predictive validity of their measures when compared

with actual persistence (e.g., Davidson et al., 2009; Pascarella and Terenzini, 1980; Terenzini et al., 1981). Furthermore, several PSC-based studies have examined persistence in this way (e.g., Dixon Rayle et al., 2006; Gloria & Ho, 2003; Gloria et al., 1999; Gloria et al., 2005; Gloria & Robinson Kurpius, 2001; Lin, 2011; Phouybanhdyt, 2011; Robinson Kurpius et al., 2008), including one recent study examining the experiences of R/EM students on academic probation (Phouybanhdyt, 2011). The next section presents the research questions and hypotheses that guided the study.

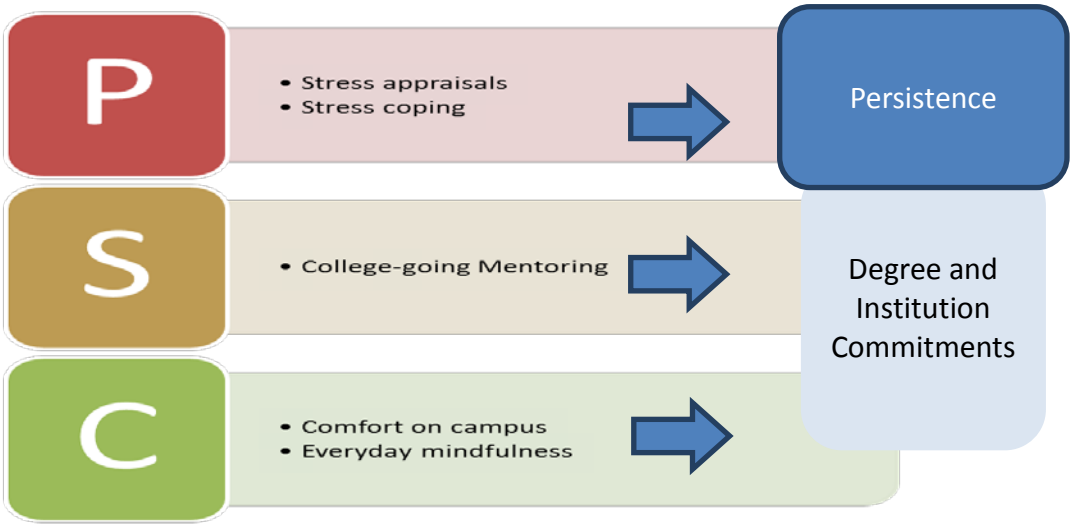
Study Overview

The PSC-approach allows for the examination of the cognitive and non-cognitive variables and student-by-environment interactions that contextualize the college persistence experiences of R/EM college students. An important cognitive variable for persistence-to-completion is academic achievement. All degree-seeking students must meet and maintain academic progress requirements (e.g., grade point average). However, the *process* of successfully meeting academic achievement standards can be examined through a conceptual framework of non-cognitive variables. Non-cognitive variables provide information about the *how* of student success and persistence processes.

Thus, the conceptual model for the current study (see Figure 2) defined the criterion variable of academic persistence as students' degree and institution commitments. Additionally, the following non-cognitive predictor variables were examined: (a) stress appraisals (b) stress coping strategies, (c) perceptions of social support from mentors, (d) perceptions of and comfort in the college environment, (e) and everyday mindfulness.

Figure 2.

Psychosociocultural Framework of Academic Persistence Wellness



Research statement. Persistence-to-completion is related to several non-cognitive factors that (a) form a psychosociocultural model of persistence wellness, and (b) individually and collectively contribute to persistence commitments for college students on academic probation (probation being a potential barrier to persistence).

Research questions and hypotheses. Two research questions were posed. It was asserted that for students on academic probation, persistence commitments would be propelled by the PSC-based predictor variable set of: challenge-appraisals of the stress of being on academic probation, a large number and variety of stress coping strategies, a positive perception that mentors are supportive of college goals, comfort in the university environment (enough to reduce the potential for discomfort becoming a barrier to persistence), and a greater degree of everyday mindfulness. As such, the following null and alternative hypotheses were posed and tested.

Research question one. For undergraduates on academic probation, what is the relationship (correlational and predictive) between psychosociocultural non-cognitive variables (i.e., stress appraisal and coping, mentor support, college environment perceptions, and everyday mindfulness) and the criterion variable of college persistence (i.e., degree and institution commitments)?

> **H0:** There is no relationship between the PSC predictor variable set or individual predictor variables and the criterion variable (i.e., college persistence).
>
> **H1:** There is a significant relationship between the PSC non-cognitive variables predictor *set* and the criterion variable. The PSC non-cognitive variables predictor set is significantly associated with (correlated and predictive of) the criterion variable.
>
> **H2:** There are significant relationships among the *individual* PSC predictor variables and with the criterion variable (i.e., persistence commitments). Individual PSC non-cognitive predictors are significantly associated with the criterion variable and the other non-cognitive predictors.

Psychological-dimension variables

H_{1a}: Challenge-type stress appraisals related to being on academic probation are positively correlated with persistence.

Social-dimension variable

H_{1b}: Having more positive perceptions of college-setting mentoring support are positively associated with persistence.

Cultural-dimension variables

H_{1c}: Having more positive perceptions of and comfort in the college-setting environment is positively correlated with persistence.

H_{1d}: Higher everyday mindfulness will be significantly and positively correlated with the criterion and the other non-cognitive predictors.

Research question two. Are there significant between-group and within-group differences in the relationships between the non-cognitive predictor variables and the criterion variable when examined by race/ethnicity and by academic probation status?

H0: There are no group differences in the relationship between the PSC predictor variable set or individual predictor variables and the criterion variable (i.e., persistence commitments).

H1: There are significant group differences in the relationship between the PSC non-cognitive variables predictor *set* and the criterion variable (i.e., persistence commitments).

H2: There are significant group differences in the relationships among the *individual* PSC predictor variables and with the criterion variable (i.e., persistence commitments).

The next chapter provides a summary of the methodology that was used to examine these research questions and to test the hypotheses stated.

Chapter III

Method

This chapter provides a detailed description of the methodology that was used for the dissertation study. First, the study setting and participant recruitment are described. Then, the instruments selected to measure the predictor and criterion variables are outlined. The chapter concludes with a description of the analyses used for examining the study's research questions and hypotheses.

Study Setting

Description of the university and students. This study was conducted at the University of Wisconsin-Madison (UW-Madison). As the flagship institution of the 26-campus UW-System, UW-Madison is a large, public, doctoral-level university that awards Bachelor's, graduate, and professional degrees across thirteen schools and colleges. In Fall 2010, there were 28,897 total undergraduates enrolled (27,746 full-time) of whom 3,990 (13.8%) were racial/ethnic minorities (R/EM; i.e., African American, Southeast Asian, Other Asian, American Indian, Native Hawaiian, Hispanic/Latino(a); UW-Madison Data Digest, 2012).

Undergraduate retention and graduation rates. The UW-Madison Office of the Provost has identified rates of retention and degree completion—for undergraduates generally and R/EM students particularly—as two areas of academic achievement accountability in need improvement (Milner & Huhn, 2006). A review of UW-Madison academic achievement data (i.e., retention and graduation rates) provided support for conducting the study at this university

(e.g., UW-Madison APA/Provost, 2011). Thus, a summary of UW-Madison academic achievement data is provided next.

Retention rates: 2005-2009 incoming cohorts. A review of two-year and three-year retention (i.e., enrollment) data for the most recently reported years (i.e., 2005 to 2009) indicated that the majority of incoming (i.e., first-year, first-time) undergraduates remained enrolled for at least three years (UW-Madison APA/Provost, 2011). However, there were retention rate gaps between R/EM and non-R/EM students. The average second year enrollment rate was 90.78% for R/EM students and 93.98% for non-R/EM students, indicating an average gap of 3.08% (UW-Madison APA/Provost, 2011). The average third year enrollment rate was 82.46% for R/EM students and 89.3% for non-R/EM students, indicating an average gap of 6.84% (UW-Madison APA/Provost, 2011). In sum, as time-to-degree increases, the retention rate decreases for all students and the gap between R/EM and non-R/EM students increases.

***Four-year graduation rates: 2001-2007 incoming cohorts*.** A review of graduation rates for the most recently reported years (i.e., 2001-2007) indicated that an average of 51.61% of undergraduates completed their degrees in four years (UW-Madison Provost/APA, 2011). A closer look at these data indicated striking differences between R/EM and non-R/EM students. On average, 30.47% of R/EM students and 53.57% of non-R/EM students graduate in four years (UW-Madison Provost/APA, 2011). More precisely, the four-year graduation rate gap between R/EM students averaged 23.1% (UW-Madison APA/Provost, 2011). A comparison of six-year graduation rates indicated that the gap persists over time. These six-year data are summarized next.

***Six-year graduation rates: 2001-2005 incoming cohorts*.** For the 2001-2005 incoming cohorts, the majority (ranging from 80.5% to 84.0 %) of undergraduates completed their degrees

within six years (UW-Madison APA/Provost, 2011). The average six-year rate for R/EM students (66.08%) and non-R/EM students (83.74%), however, indicated a gap of 17.66% (UW-Madison APA/Provost, 2011). A description of the 2005 incoming cohort is summarized next.

The fall 2005 incoming cohort included 535 R/EM students (8.7%) and 5,606 (91.3%) non-R/EM students (UW-Madison, 2011-2012). Additionally, there were 1,233 (20.1%) first-generation students (i.e., parents had not received baccalaureate), and 565 (9.2%) students received Pell Grants (e.g., qualified for income-based aid). The six-year graduation rate for the whole cohort was 82.8%. However, there were prominent differences for cohort subgroups with the six-year rates as follows: 68.8% for targeted REM students, 69.7% for Pell Grant recipients, 78.8% for first-generation students, and 84.1% for non-targeted students.

Given the pronounced retention and graduation gaps between UW-Madison R/EM, other under-represented students (i.e., first-generation and lower income), and non-R/EM students, additional research investigating the cognitive and non-cognitive factors of retention and time-to-degree was warranted. The next section describes participant recruitment. The study inclusion criteria, recruitment strategies, and participation incentives are outlined.

Participant Recruitment

Sample size and inclusion criteria. A priori sample size calculations for a single-group study of associations (i.e., students on academic probation) indicated that twenty-seven to fifty-nine participants would be appropriate given the following parameters: the number of predictor variables (n = 5), within-set predictors (i.e., 2 psychological-set predictors, 1 social-set predictor, 2 cultural-set predictors), the analyses to be conducted (i.e., correlations and hierarchical regressions), the anticipated effect size (f^2 = .35), the desired level of statistical power (0.80), and the level of probability to detect a relationship (p-value α = .01 to .05; see

http://danielsoper.com/statcalc3/). As such, the predetermined minimum for the total number of participants on academic probation was 60 students. Additionally, in order to have adequate power and effect size parameters for group analyses (i.e., Student t-tests) by academic probation status and/or R/EM group membership, minimum group sample sizes of 21 were indicated (see http://danielsoper.com/statcalc3/).

Participant data was analyzed only for participants who met the following inclusion criteria: (a) enrolled full-time as an undergraduate (i.e., 12 credits or more), and (b) 18 years of age or older. However, participant subgroups were based on minority group membership and academic probation status. Minority group definitions matched those used by the UW-Madison Office of the Provost. As such, R/EM students included "African-American, Native American, Hispanic, and Southeast Asian (Cambodians, Laotians, Vietnamese, and Hmong)" and non-R/EM students included "white, other Asian, and international students" (UW-Madison Provost/APA, 2011, p. 4-5). Academic probation status was determined by participant-reported cumulative grade point average as well as self-report of academic standing (i.e., "Are you currently on academic probation? Yes/ No?"). Enrollment status and age were also determined by self-report. All inclusion criteria were assessed via a demographic-type survey developed for this study (see *Instrumentation* section and Appendix A).

Recruitment strategies. Knight, Roosa, and Umaña-Taylor (2009) have cogently recommended different strategies for improving the recruitment of R/EM participants. For example, the authors recommended that researchers "partner with well-known organizations that represent or serve the interests of the targeted group" (p. 60). Similarly, the authors stated that "personal contact may be particularly effective for recruiting" (p. 55; see also APA Guidelines, 2003). Thus, the researcher contacted personnel with UW-Madison offices and programs (e.g.,

the Office of the Registrar, Cross-College Advising Services, the Academic Advancement Program, and the Center for Educational Opportunity) some of whom provided assistance with strategic recruitment to undergraduates who met the study inclusion criteria. Additionally, the researcher worked with the instructors of two Counseling Psychology undergraduate classes (i.e., Academic Enhancement Seminars and CP: 650) to distribute information about the study.

Participation incentives. Two incentives were offered to all participants: (a) campus wellness e-brochure and (b) summary of study results. Two additional incentives were offered to select participants: (a) gift card raffle, and (b) 1-point of extra-credit. The opportunity to opt-in was included in the informed consent information. After completing the survey, participants were able to choose to opt-in for incentives by providing basic contact information (i.e., name, email address, and telephone number). Survey data and contact information were not connected, and contact information was destroyed after the incentives were distributed.

Gift card raffle. Eligible participants were determined (n = 80), and the first 60 participants who completed the survey were numbered and entered into a random number generator which was used to identify the raffle winners. A total of ten Downtown Madison $10 gift cards (see http://visitdowntownmadison.com/) were awarded. Because the raffle was conducted upon obtaining the minimum sample size (n = 60), odds of winning a gift card were 1:6. Gift card winners were contacted via email to arrange for mailing the gift card.

Wellness e-Brochure. All participants were offered a Wellness e-Brochure (developed for this study, see Appendix I). A total of 70 participants (24%) signed up to receive the e-Brochure. The decision to provide the e-Brochure as a participation incentive was based on the recommendations of Hale, Greenberg, and Ramsey (1990) who noted that although significant resources may exist for students, they may not always be aware of the resources or perceive the

resources as for them (Hale et al., 1990). Thus, the researcher designed an e-Brochure that described psychological-social-cultural wellness resources available on campus, in Madison, and via the internet. Data obtained from the Student Background Questionnaire (see Appendix A) helped to inform e-Brochure content (e.g., participants' favorite campus resources for relaxation or academic support).

Extra-credit point. Arrangements were made with two Department of Counseling Psychology course instructors (i.e., Academic Enhancement Seminar and Theory & Practice of Interviewing) to provide one-point of extra credit to their students. This incentive was awarded to a total of 143 students.

Study Results. A total of 108 students signed up to receive a summary of the study results. A one-page summary was created and e-mailed to students.

Study Participants

A total of 309 students began the online survey. Of these, 246 surveys were retained for data analyses based on the study inclusion criteria described above, resulting in a completion rate of 80%. More specifically, surveys were included in analyses when demographic information pertaining to students' academic probation status and race/ethnicity was provided. As students were recruited indirectly via various academic and student support programs across campus, it is unknown how many students were actually invited to participate in the study. Some recruitment partners provided the researcher with information about the number of students to whom they forwarded the survey; however, other research partners did not. Also, some partners forwarded the survey to all of their students while other partners were more strategic with recruitment (e.g., forwarded the survey invitation only to students on academic probation or only to R/EM

students). A detailed description of participants' background characteristics is provided in the next chapter.

Instrumentation

Procedure. Qualtrics is a secure internet-based resource for the development, distribution, and management of survey-based research and was used for this study. All UW-Madison faculty, staff, and students may use Qualtrics at no charge.

Prior to launching the survey with study participants, the survey was pilot tested with four persons in order to obtain feedback pertaining to survey completion time, instructions, and flow. Pilot participants were instructed to complete the survey as if they were a college undergraduate on academic probation. The pilot participants averaged a 25-minute completion time and reported that the survey was generally easy to take (e.g., number of items per page was manageable and scale responses were always visible). Though they reported that the survey generally flowed well, they provided three recommendations that were implemented to enhance survey flow. First, additional headers were added to the demographic survey. Second, all survey headers were formatted to match in size and position (i.e., centered). Finally, the "Next" button was capitalized to make it clear where a participant would click when ready to move on to the next page. After addressing pilot-participants' recommendations, the final survey was launched.

Study participants were asked to complete all measures online, via Qualtrics, and in one sitting. The survey completion time ranged from 7-130 minutes (with outlier-participants trimmed) with an average completion time of 22 minutes (M = 22.09, SD = 15.80).

Overview of measures. Six standardized measures and one background questionnaire were used for this study. Standardized measures are listed here by PSC dimension variables and

criterion variable with a detailed description of and rationale for choosing each instrument provided as well.

The *psychological dimension* was assessed via two instruments designed to measure variables pertaining to stress appraisal and coping: the Stress Appraisal Measure-Revised (Roesch & Rowley, 2005; see Appendix B), and the Coping Schemas Inventory-Revised (Wong, Reker, & Peacock, 2006; see Appendix C). The *social dimension* included one measure designed to assess interpersonal support for college: the Mentoring Scale (Gloria, 1993; Gloria et al., 1999; see Appendix D). The *cultural dimension* included two measures designed to assess the college environment and everyday mindfulness: the University Environment Scale (Gloria & Robinson Kurpius, 1996; see Appendix E) and the Mindful Awareness and Attention Scale (Brown & Ryan, 2003; see Appendix F). The *criterion variable*, persistence-to-completion (i.e., degree and institution commitments), was measured with the College Persistence Questionnaire (Davidson, Beck, & Milligan, 2009; see Appendix G).

Student background characteristics questionnaire. A demographic-type survey (see Appendix A) was developed for this study. The demographic survey served four purposes: (a) screening participants for inclusion in data analyses, (b) obtaining a description of the sample beyond the information assessed by the standardized measures, (c) describing subsets of the sample in relation to the research questions and hypotheses, and (d) generating content for the Wellness e-Brochure participation incentive.

The survey included items from demographic surveys used in other PSC-based studies (i.e., Lin, 2010; Phouybanhdyt, 2011), items assessing baseline college and financial stress (i.e., Davidson, 2012, personal communication), and open-ended questions pertaining to campus resources and experience with meditation. To determine academic standing, students were asked

to report their academic standing in terms of probation status and most recent end-of-semester cumulative grade point average (i.e., spring 2012). Students were asked to report race/ethnicity (i.e., UW-Madison categories as described in inclusion criteria above), individual or family income (e.g., income-minority status indicators such as federal Pell Grant eligibility will be used), and generation in college (i.e., first-generation college students are "students whose parents do not have 4-year college degrees" and all other students are classified as *continuing*-generation; Stephens et al., 2012, p. 2).

Psychological dimension variable set. Within the psychological dimension, two aspects of the construct of stress response processes were assessed: (a) stressor appraisals and (b) stress coping strategies. One instrument was used to measure stress appraisal and another to assess stress coping. Each instrument is discussed in turn.

***Stress Appraisal Measure-Revised (SAM-R; Roesch & Rowley, 2005*).** The SAM-R was adapted from the Stress Appraisal Measure (SAM) developed by Peacock & Wong (1990; Wong, Reker, & Peacock, 1993). The initial SAM was a 24-item, six-dimension instrument grounded in Lazarus and Folkman's (1984) transactional, cognitive-relational theory of stress. The SAM was designed to assess a person's perceptions (i.e., primary and secondary appraisals) of an anticipatory inner and/or external source of stress (Peacock & Wong, 1990). Primary appraisal was defined as a person's initial categorization of an experience/event (i.e., threat, challenge, centrality), and secondary appraisal was defined as a person's assessment of event controllability (i.e., internal control, external control, not controllable). The SAM was tested with two samples of undergraduates enrolled in psychology courses (N = 100 and 144). Participants were asked to respond to the questionnaire items while considering a future potential stress event (i.e., final exam, job loss, medical illness). Peacock and Wong (1990) found initial support for a

six-dimension model of primary and secondary appraisal of anticipatory stress; however, they made two recommendations for future research which included continued investigation (a) of the psychometric properties of the instrument, and (b) with previous and current stressor events (rather than hypothetical future stressors; Peacock & Wong, 1990). Another limitation of the SAM development study was that Peacock and Wong (1990) did not report any information pertaining to students' characteristics (e.g., race/ethnicity, gender) other than in which psychology course students were enrolled. Roesch and Rowley (2005) have addressed the recommendations made by Peacock and Wong in their development of a modified version of the SAM suitable for the proposed study. The revised instrument (SAM-R) is described next, and the rationale for using it with the proposed study is given.

Roesch and Rowley (2005) conducted a study to examine the psychometric properties of the SAM with the intent "to develop a general, dispositional measure of appraisal" with higher internal consistency and generalizability for past, current, and potential stressors (p. 190). The authors obtained a large sample of undergraduate participants (N = 610) divided equally into two groups (i.e., exploratory analysis group and validation group). The participant sample was 67% female, 35% were racial/ethnic minorities (i.e., Filipino American, Asian American, Mexican American, and biracial), and 48% were White. Exploratory and confirmatory factor analyses resulted in a 19-item, four-subscale instrument (SAM-R; Roesch & Rowley, 2005).

When completing the SAM-R, respondents are asked to consider "how they generally think and feel when encountering a stressful event" and may select one response per item (Roesch & Rowley, 2005, p. 190). Response options are based on a five-point Likert-type scale ranging from 0 (*not at all*) to 4 (*a great amount*). Primary appraisal is assessed across three of the four subscales: *Challenge* (7 items, e.g., "I am excited about the potential outcome"), *Threat*

(5 items, e.g., “I perceive stress as threatening”), and *Centrality* (4 items, e.g., “There are long-term consequences as a result of stress”). Higher scores on the Challenge subscale indicate more “optimistic and self-efficacious thoughts” (p. 193). Higher scores on the Threat subscale indicate having more “feelings associated with a threatening situation (e.g., anxiety, helplessness)” (p. 193). Higher scores on the Centrality subscale indicate the degree of situation importance, or the “stakes” involved (Peacock & Wong, 1999, p. 234). Secondary appraisal is assessed on one subscale, labeled *Resources* (3 items, e.g., “There is someone I can turn to for help”). Higher scores on the Resources subscale indicate a greater perception that the stressor can be addressed through coping resources in order “to reduce the potential for harm or improve the chances for benefit” (Roesch & Rowley, 2005, p. 194). Adequate internal consistency reliability was reported for all four subscales (α = .72 to.85); however, Roesch and Rowley (2005) reported that analyses by racial/ethnic minority group were unavailable due to small and unequal sample sizes. No significant differences were reported based on gender.

The SAM-R was selected for the current study for several reasons. First, the instrument was developed as a theory-based assessment of stress appraisal. It is aligned with and expands upon the Lazarus and Folkman (1984) transactional, cognitive-relational theory of the stress process (Peacocket al., 1993; Roesch and Rowley, 2005). Second, adequate psychometric properties have been reported when used in studies examining (a) specified anticipatory stressors (using the SAM; Peacock & Wong, 1990), and (b) dispositional appraisals of stress (using the SAM-R; Roesch & Rowley, 2005). Third, the SAM-R has fewer items but has obtained greater internal consistency reliability than the SAM, and it was tested with a large and racially/ethnically diverse sample. Fourth, the SAM-R has been selected over an oft-cited measure of stress appraisals, the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein,

1983). Though the PSS has been used in research with college students (e.g., Coffman & Gilligan, 2002; Greer & Brown, 2011), it was designed "for examining the role of nonspecific appraised stress" (Cohen et al., 1983, p. 385). As this study sought to examine a specified stressor (i.e., being on academic probation), the SAM-R appeared to better operationalize stress appraisal for this study. Finally, the SAM-R has also been selected over measures that appraise multiple domains of college-setting stress (e.g., College Environmental Stress Inventory-Modified [CESI-M], Gloria, 1993; College Stress Inventory, Solberg, Hale, Villareal, & Kavanagh, 1993). In particular, the CESI-M has been used frequently in PSC-based persistence research (e.g. Gloria et al., 1999; Gloria & Ho, 2003; Dixon Rayle et al., 2006). The CESI-M is a two-subscale instrument designed to measure two domains of college-setting stress: financial and academic. Researchers have reported adequate reliability using the CESI-*M* with samples of racial/ethnic minority students (α = .81 to.88; Gloria et al., 1999; Gloria & Ho, 2003; Dixon Rayle et al., 2006). Too, higher financial and academic stress have been significantly and negatively correlated with persistence decisions (e.g., Dixon Rayle et al., 2006). However, because the proposed study focused on the appraisal of a single, pre-identified stressor, the SAM-R was selected over measures designed to assess multiple types of stress.

In order to match the recommendations made by Peacock and Wong (1990) and Roesch and Rowley (2005), the SAM-R was modified for use in this study. Specifically, the instructions were written to ask participants to appraise the stressfulness of a specified situation of stress (i.e., being on academic probation). Thus, items were adapted as appropriate (e.g., "I have the ability to cope with this situation").

Coping Schemas Inventory-Revised (CSI-R; Wong, Reker, & Peacock, 2006). The CSI-R was designed to measure domains or schemas of coping effectively with appraised stressors.

Wong et al. (2006) defined *coping schemas* as "a group of coping behaviors that share a common psychological function" (p. 252), and where "the objective of coping is to reduce stress and resolve problems" (p. 252). Wong et al. (2006) sought to develop a coping schemas measure that would (a) build in "cross-cultural research" and "sociocultural context" into the stress response process (p. 225), and (b) expand upon the number of coping domains assessed by previous instruments (e.g., Ways of Coping, Folkman & Lazarus, 1988; Coping Response Inventory, Moos, 1988; COPE, Carver, Scheier, & Weintraub, 1989).

Wong et al. (2006) described *effective coping* as a dynamic cycle of *creative, reactive, and/or protective* stress responding. Creative coping refers to a positive and proactive process of building resources across multiple domains (e.g., spiritual, financial, cultural). Reactive coping refers to engaging one's coping resources and selecting strategies congruent at the stressor and cultural levels. Protective coping refers to appropriately managing resources in order to facilitate *positive outcomes* (i.e., "reducing stress, restoring balance, enhancing well-being"; p. 235).

The development of the CSI-R evolved out of a decade of research striving to build a coping strategies instrument grounded in the resource-congruence model of the stress process (Wong et al., 2006). The earliest versions of the instrument ranged from 65 to 81 items across eight to nine coping schemas and were tested with hundreds of university students (see Peacock & Wong, 1996 and Wong et al., 2006). The final instrument has been identified by Wong et al. (2006) as the 72-item, nine-subscale CSI-R.

When completing the instrument, respondents are asked to consider the statement, "To what extent do you usually use each of the following strategies to cope with *[*blank*]* (researcher-identified stressor/situation)?" Respondents may select one response per item with options presented on a 5-point Likert type scale ranging from 1 (*Not at all/ Never*) to 5 (*A great deal/*

always). The nine coping strategy schemas measured are: *Situational* (8 items, e.g., "Do something about the situation"), *Self-restructuring* (8 items, e.g., "Do what is necessary to fulfill the requirements of the situation"), *Active Emotional* (8 items, e.g., "Confront and understand my own feelings"), *Passive Emotional* (12 items, e.g., "Suppress or avoid facing my own emotions"), *Meaning* (4 items, e.g., "Believe that there must be a purpose in the suffering I experience"), *Acceptance* (9 items, e.g., "Don't worry about the past or the future, accept each day as it comes"), *Religious* (9 items, e.g., "Seek help and direction from God"), *Social Support* (6 items, e.g., "Rely on people who have successfully coped with the problem"), and *Tension Reduction* (8 items, e.g., "Practice meditation techniques to reduce tension"). To interpret the CSI-R, mean scores are calculated for each schema. Additionally, coping schema mean scores can be ranked to indicate the schemas used most often by the population studied in response to the stressor specified in the survey instructions. For example, Peacock and Wong (1996) asked university students to consider how they might cope with three different stressors (i.e., a natural disaster, summer employment decisions, teacher bias). Students reported significantly higher mean scores on the social support schema for the natural disaster stressor than for the other two stressors—indicating that preferred coping strategies may vary by the type of stressor.

In sum, the CSI-R is grounded in the resource-congruence model and has been used in tandem with the SAM (described above) in an examination of college students' stress experiences. Adequate internal consistency reliability has been reported for all subscales (α = .72 to.98; Wong et al., 2006). Descriptive information pertaining to the CSI-R development samples was not located by this researcher; however, Wong et al. (2006) reported that "over a ten-year period, more than 600 subjects were recruited…. [and] serious attempts were made to include a

range of age groups and ethnic minorities" (p. 249). Thus, the CSI-R is an appropriate measure of stress coping for the proposed study.

A 37-item version of the instrument was used for the current study (referred herein as the CSI-R5) and included five of the original subscales: (a) Situational, (b) Self-restructuring, (c) Meaning, (d), Acceptance, and (e) Tension Reduction. These subscales were selected given their specific operationalization of stress coping in relationship to the focus of this study on the interactions between the PSC-based academic wellness factors of stress, support, college climate, and mindfulness in promoting students' persistence-to-completion.

Social dimension variable set. This study examined one social dimension variable: perceptions of support from mentors. One instrument was used and is described next.

Mentoring Scale (MS; Gloria, 1993; Gloria et al., 1999). The MS was designed originally as a 6-item, single-scale instrument to assess Chicana/o college students' perceptions of social support from mentors (Gloria, 1993). To establish the initial psychometric properties of the instrument, the MS was included in a study that examined several other PSC-based factors (e.g., other sources of social support, self-efficacy beliefs and self-esteem, perceptions of the college environment) hypothesized to contribute to the persistence beliefs of Chicana/o undergraduates (N = 339; Gloria, 1993). Respondents were asked to indicate the persons perceived to be supportive during *high school* (1 item, "There was someone at your high school who encouraged/believed in you"), *at college* (4 items, e.g., "There is someone on campus who is your mentor"), and more *generally* (1 item, "There is someone with whom you identify as a role model"). Response options were on a 4-point Likert-type scale ranging from 0 (*no one*) to 3 (*four or more persons*). Higher MS scores were indicative of having a greater number of and

degree of support from mentors. Adequate internal consistency reliability was reported for the validation sample (α = .73; Gloria, 1993).

The current study used a modified, 5-item version of the instrument (MS-5; see Phouybanhdyt, 2011) which omitted the item pertaining to high school mentors and used a Likert-type scale that ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). The MS-5 was used recently in a PSC-based study that examined the college-going experiences of R/EM and non-R/EM students on academic probation (Phouybanhdyt, 2011). Adequate internal consistency reliability was reported (N = 91; α = .87). Additionally, scores were stable across demographic categories (i.e., race/ethnicity, gender, and year in school; Phouybanhdyt, 2011). Further, mentoring support was evidenced to be significantly correlated with students' perceptions and use of campus resources (e.g., academic and health services; Phouybanhdyt, 2011).

In other studies examining the college experiences of R/EM undergraduates, adequate internal consistency reliability estimates have been reported with the original and researcher-modified versions of the MS (e.g., Ns = 91 to 160, α = .70 to.87; Bordes & Arredondo, 2005; Bordes et al., 2006; Gloria et al., 1999; Gloria & Ho, 2003). Additionally, perceptions of mentoring support have been found to significantly correlate with and predict persistence decisions. For example, Gloria et al. (1999) reported that for African American undergraduates, mentoring support was significantly correlated with persistence decisions. Similarly, Bordes et al. (2006) reported that for Latina/o undergraduates, more positive perceptions of mentoring (i.e., higher MS scores) were found to be one of the strongest predictors of academic persistence within the social-support variable set (second only to the variable of friend support). These data provided sufficient evidence of Mentoring Scale reliability and validity and thus provided support for using the instrument in the current study.

Cultural dimension variable set. PSC-based research investigations on the persistence wellness experiences of R/EM college students have operationalized the cultural dimension with several variables, for example: values congruity, comfort in social and academic settings, environment stress. This study examined two variables: (a) college-environment perceptions and comfort, and (b) everyday mindfulness.

University Environment Scale (UES; Gloria and Robinson Kurpius, 1996). The UES is a 14-item, single-scale instrument designed to measure students' perceptions of and comfort in the college-setting environment. Items include, for example, "I feel comfortable in the university environment" and "Faculty have been available for help outside of class" (Gloria & Robinson Kurpius, 1996). Respondents are asked to select one answer per item from a 7-point Likert-type scale ranging from 1 (*not at all true*) to 7 (*very true*). Higher UES scores indicate a "more positive perception of a university's environment" (Gloria & Robinson Kurpius, 1996, p. 540).

Gloria and Robinson Kurpius (1996) reported adequate internal consistency reliability for the UES with a development sample of 454 Chicana(o) and Mexican American undergraduates (α = .84; Gloria & Robinson Kurpius, 1996). Additionally, students' perceptions of the college-setting environment were significantly predictive of and negatively correlated with academic persistence decisions. Specifically, more positive perceptions of and comfort in the university environment were predictive of more positive persistence beliefs (i.e., decisions to remain in college; Gloria & Robinson Kurpius, 1996).

Subsequent investigations of undergraduates' college experiences which have used the UES have further confirmed the reliability and validity of using the instrument with R/EM students. For example, several researchers have reported adequate internal consistency reliability with R/EM study participants (e.g., α = .79 to .87; Castillo et al., 2006; Gloria et al., 1999; Gloria

& Ho, 2003; Gloria & Robinson Kurpius, 2001; Wei, Ku, & Liao, 2011). Additionally, more positive perceptions of the university environment have been correlated with several variables assessed in PSC-based research with R/EM college students, including more positive persistence attitudes (e.g., Castillo et al., 2006; Dixon Rayle et al., 2006; Wei et al., 2011), lower perceived stress (Dixon Rayle et al., 2006; Wei et al., 2011), and psychological well-being (Gloria et al., 2009). These data provided ample psychometric support for including the UES in the present study.

Mindful Awareness and Attention Scale (MAAS; Brown & Ryan, 2003). To measure the variable of everyday mindfulness, the MAAS was selected. Brown and Ryan (2003) designed the MAAS to operationalize their definition of mindfulness as a dispositional phenomenon of awareness and attention to the internal and external present moment. Dispositional mindfulness was described as separate from the attitudes toward (e.g., openness) and outcomes from (e.g., pain management) mindfulness-based practices such as some forms of meditation. Brown and Ryan (2003) described dispositional mindfulness as a "naturally occurring characteristic" or attribute that exists to some degree for all persons even without (or before) the intentional cultivation of mindfulness through formal treatment/training programs (p. 822). The authors further hypothesized that "highly mindful individuals are theorized to be more attentive to and aware of internal (psychological and physical) constructions, events, and processes than are less mindful individuals" (p. 833). Thus, mindfulness assessment seems an especially important addition to PSC-based research examining the college experiences, perceptions, attitudes, and decisions of under-represented students.

The MAAS is a 15-item, single-scale instrument designed to measure mindfulness across six domains (i.e., "cognitive, emotional, physical, interpersonal, and general"; Brown & Ryan,

2003, p. 825). Participants are asked to specify the extent of their agreement with each item (e.g., "I find it difficult to stay focused on what's happening in the present" and "It seems I am 'running on automatic' without much awareness of what I'm doing"). Response options are based on a 6-point Likert-type scale ranging from 1 (*almost always)* to 6 (*almost never*) with higher scores indicating more mindfulness (Brown & Ryan, 2003). To establish the psychometric properties of the MAAS, a large sample of college students (N = 327, predominantly Caucasian and female) was surveyed and adequate internal consistency reliability was obtained (α = .82; Brown & Ryan, 2003).

To establish the discriminant validity of the MAAS, Brown and Ryan compared two groups "expected to differ in degree of mindfulness" (Brown & and Ryan, 2003, p. 843). One sample-group was recruited from a local meditation center (N = 50; MAAS internal consistency α = n.r.) and the second sample-group was recruited from the local community (N = 74; MAAS internal consistency α = .86). The two groups were matched by age and gender to create two equally-sized samples (n = 50). When the MAAS scores of each sample-group were compared, the meditation group scored significantly higher on the MAAS than the general community group, providing evidence to support "that the MAAS is sensitive to individual differences in mindfulness" (Brown & Ryan, 2003, p.833).

The MAAS has been used by researchers in several studies examining the construct of mindfulness with college student populations. For example, two studies have investigated the instrument's psychometric properties (i.e., MacKillop & Anderson, 2007; Van Dam, Earleywine, & Borders, 2010). The samples for these studies were large (N = 711 and 400, respectively) and the internal consistency reliabilities adequate (α = .89 and .88). Racial/ethnic categories of these samples included, in order of the largest percentages: White/Caucasian (63% and 50%,

respectively), Asian/Asian American (23%; 19%), other/decline (7%; 13%) Hispanic/Latina(o) (4%; 9%), African American (3%; 7%), biracial (2%; not given), and American Indian (<1%; not given). Confirmatory factor analyses were conducted in both studies and indicated that the scale items represent a single factor. Additionally, differences between mean-scores for females and males were not significant (MacKillop and Anderson, 2007).

Other researchers have used the MAAS to operationalize everyday mindfulness (i.e., Cheyne et al., 2006; Christopher & Gilbert, 2010; Masuda et al., 2009; Sahdra, Shaver, & Brown, 2010; Schmertz et al., 2009; Shapiro, Brown, Thoresen, & Plante, 2011; Thompson & Waltz, 2007), to examine the construct of mindfulness in association with other variables (e.g., stress, psychological wellbeing, satisfaction with life), or to investigate the MAAS in studies examining mindfulness-based interventions (e.g., from brief activities to multi-session programs). The student-sample sizes of these studies have varied from small (N = 30) to large (N = 449). Racial/ethnic categories (when reported) of participants have included: White/Caucasian (35 to 80%), Asian/Asian American (6.7 to 45%), other/decline (5 to 9%) Hispanic/Latina(o) (2 to 11%), African American (2 to 22%; except Masuda et al., 2009, which had a 100% sample of African American students), biracial/multiracial (4 to 8%), and Native American/American Indian (1%). In these studies, internal consistency reliability of the MAAS was adequate (α = .78 to.93). Further, mindfulness (as measured by the MAAS) has been significantly correlated in the positive direction with psychological flexibility (Masuda et al., 2009) and self-esteem (Christopher & Gilbert, 2010) and in the negative direction with emotional distress (Masuda et al., 2009), perceived stress (Shapiro et al., 2011), and depressed mood (Christopher & Gilbert, 2010).

To further establish the rationale for selecting the MAAS for the current study, a brief discussion will follow describing the decision to use the MAAS rather than another instrument used frequently in mindfulness research—the Five Factor Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The FFMQ is a 39-item, 5-factor (i.e., Nonreact, Observe, Act Aware, Describe, and Nonjudge) instrument designed to measure aspects of the mindfulness construct (e.g., present-moment focus) for persons with varying degrees of experience with meditation (e.g., ranging from zero experience to regular, formal practice) and via items from five mindfulness measurement instruments, including the MAAS. The initial validation sample included a large undergraduate sample (N = 613; 70% female, 90% White/Caucasian), the majority of whom reported having no previous experience with meditation (72%). Baer et al. (2006) reported internal consistency reliability coefficients for each of the five instruments, with adequate reliability obtained for the MAAS (α = .86) which provided additional support for using the MAAS in the current study.

Additionally, factor analyses resulted in all MAAS items loading onto one FFMQ subscale, "Acting with Awareness" (FFMQ-Actaware). The FFMQ-Actaware is an 8-item subscale of which five items were retained from the MAAS (e.g., "I find it difficult to stay focused on what's happening in the present"; Baer et al., 2006). Thus, because the FFMQ-Actaware subscale includes several items from the MAAS, an evaluation of the MAAS within the context of studies that have used the FFMQ (e.g., Baer et al., 2006; Bowlin & Baer, 2012) provided further support for using the MAAS in the proposed study. For example, Bowlin and Baer (2012) used the FFMQ to examine dispositional mindfulness, stress, and self-control with an undergraduate sample (mean age 19, 63% female, 95% White) recruited from introductory psychology (sample n = 192) and honors program courses (sample n = 88). The authors reported

that higher scores on the FFMQ-Actaware subscale (e.g., higher present-moment attention and awareness) were significantly correlated with higher self-control and lower stress.

In sum, the MAAS appears to be an appropriate instrument for the current study given this study's examination of college student stress processes and specific operationalization of the mindfulness construct (e.g., present-moment attention and awareness in the everyday).

Criterion variable. The persistence wellness outcome construct measured in this study was college persistence (i.e., commitments to persist). Several PSC-based studies have measured persistence intentions and commitments with the Persistence and Voluntary Departure Decisions scale (P/VDD) developed by Pascarella and Terenzini (1980; e.g., Dixon Rayle et al., 2006; Gloria & Ho, 2003; Gloria et al., 1999; Gloria et al., 2005; Gloria & Robinson Kurpius, 2001; Robinson Kurpius et al., 2008). However, a newly-developed instrument the College Persistence Questionnaire (Davidson, Beck, & Milligan, 2009) has been selected for the current study given evidence of the instrument's strong reliability and predictive utility in PSC-based investigations with populations similar to those in the current study—specifically, R/EM students (Lin, 2011) and R/EM students on academic probation (Phouybanhdyt, 2011).

College Persistence Questionnaire (CPQ; Davidson et al., 2009). The CPQ is a 34-item, 6-subscale instrument designed to measure several aspects of students' experiences that promote or detract from undergraduate persistence-to-completion. Davidson et al. (2009) sought to create a brief questionnaire that would be grounded in evidence-supported models of student retention and persistence and would:

> "enable users to: (a) identify students at risk of dropping out, (b) discover why an individual student is likely to discontinue his or her education, and (c) determine variables that best distinguish undergraduates who will persist from those who will not persist at their institutions" (p. 374).

The authors generated an initial pool of fifty-three questionnaire items across six "variables that had been associated with retention or attrition in one or more empirical studies" (p. 380) and tested the instrument in two separate studies designed to establish and confirm the psychometric properties of the CPQ (Davidson et al., 2009).

In the first study, factor analysis statistics were performed and the instrument was condensed to the 34-item, six-subscale CPQ which was tested with the second sample. The six scales and sample items included: *academic integration* (8 items; e.g., In general, how satisfied are you with the quality of instruction you are receiving here?"), *social integration* (e.g., "How strong is your sense of connectedness with other faculty, students, staff on this campus"), *support services satisfactions* (6 items; e.g., "How satisfied are you with the academic advisement you receive here?"), *degree commitment* (5 items; e.g., "At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere?"), *institutional commitment* (4 items; e.g., "How likely is it that you will reenroll here next semester?"), and *academic conscientiousness* (3 items; e.g., "I am disinterested in academic work and do as little as possible"; Davidson et al., 2009, pp. 378-379). Participants are asked to select one response from a 5-point Likert-type scale or select *not applicable*. Response option anchors are matched to the wording for each question (e.g., *very satisfied* to *very dissatisfied* or *very much* to *very little*).

The psychometric properties for the 34-item CPQ were initially established with a large sample of undergraduates (N = 2022) attending one of four schools (i.e., one two-year technical college and three Master's Degree-level universities). The majority of participants in the validation sample were female (69%), under the age of 25 (62%), and Caucasian (71%). R/EM participants in the sample included Black students (19%), Hispanic students (7%), Asian students

(2%), and Native American and "other" students (2%). Internal consistency reliability coefficients were adequate for five of the six subscales (α = .70 to .82) and less adequate for one subscale (i.e., academic conscientiousness, α = .63). Subscale mean favorability scores ranged from .25 to 1.70, with only one subscale favorability score falling below 1.00 (i.e., social integration). The three subscales with the highest favorability scores were degree commitment (*M* = 1.70), academic conscientiousness (*M* = 1.25) and institutional commitment (*M* = 1.15). Further, the degree and institutional commitment subscales were described as "stable across time" in test-retest analyses examined with a subset (*n* = 66) of the validation sample (Davidson et al., 2009, p. 381).

Davidson et al. (2009) then conducted a study to examine CPQ scores in relationship to cognitive indicators of retention (i.e., pre-college test scores and academic rank) and actual enrollment decisions for a subsequent term. Participants (*N* = 257) were enrolled in a fall "orientation course" for first-year undergraduates and the racial/ethnic background of the sample included Caucasian students (70%), Hispanic students (18%), and African American students (12%). Female and male students were equally represented, and the average age of participants was just under 20 years old (*M* = 19.63). Internal consistency reliability coefficients were not reported for this sample. The authors obtained second-year enrollment information for all participants and reported that just over half were retained at the institution. Using a favorability total score cutoff (*M* = .43) as a guide, the authors conducted regression analyses and found that "66% of students were successfully classified" as retained or not based only on CPQ total scores (Davidson et al., 2009, p. 382). Additionally, three subscales were predictive at significant levels (i.e., institutional commitment, academic conscientiousness, and academic integration). These results provide initial support for using the CPQ as a proxy for actual retention given the

instrument's ability to "reliably [distinguish] between freshmen who did and did not return as sophomores" (Davidson et al., 2009, p. 382).

The current study used a modified version of the CPQ used by Lin (2011) and Phouybanhdyt (2011) in two PSC-based studies. Both authors combined the items from the Institution Commitments and Degree Commitments subscales into one nine-item scale ("CPQ-Commit"). CPQ-Commit scores were used as a proxy of students' college persistence. Raw scores (rather than transformed, favorability scores) were used for analyses, and higher CPQ-Commit scores indicated stronger and more positive commitments to obtain a college degree and to do so from a specific institution.

With participant samples of R/EM students (Lin, 2011) and R/EM students on academic probation (Phouybanhdyt, 2011), both authors reported adequate reliability and validity. More specifically, Lin (2011) obtained a large sample of UW-Madison undergraduates (N = 272), of whom 77 were R/EM students. The CPQ-Commit evidenced adequate internal consistency reliability with R/EM students (α = .82) and was significantly and positively correlated with students' perceptions of mentoring, experiences in the university environment (as measured by the UES), and problem solving (e.g., stress coping strategies). Similarly, Phouybanhdyt (2011) obtained a large sample of UW-Madison undergraduates on academic probation (N = 93; n = 34 racial/ethnic minority students, n = 59 majority students) for whom the CPQ-Commit internal consistency reliability was adequate (α = .78; the reliability coefficient was reported for only the total sample). Additionally, more positive institution and degree completion commitments were significantly and negatively correlated with several attribution categories identified by students as contributing to their academic probation status—and related specifically to the current study (e.g., low desire to be in college and obtain degree, lack of access to and use campus resources,

lack of ability or knowledge in asking for help; Phouybanhdyt, 2011). In sum, PSC-based studies (i.e., Lin, 2011; Phouybanhdyt, 2011) have reported adequate reliability and validity for using the CPQ-Commit with populations that were similar to those recruited for the current study (i.e., R/EM students on academic probation). As such, there is ample support for using the CPQ-Commit to measure the criterion variable in the current study (i.e., college persistence commitments).

A further modified version of the CPQ-Commit scale was used for the current study. During personal correspondence with the first author of the original scale, a revised version of the CPQ was received (Davidson, June 2012). As such, the CPQ-Commit used for the current study used the question wording and anchors provided in the newest version of the CPQ. Additionally, another question had been added to the Degree Commitment subscale which made the CPQ-Commit a 10-item instrument.

Statistical Analyses

The next chapter will provide a detailed description of the study results. The results are organized by research question beginning with the primary analyses pertaining to students on academic probation. The secondary and exploratory analyses will also be presented.

Chapter IV

Results

The primary purpose of this study was to investigate the non-cognitive factors that propel the college persistence of students on academic probation, specifically—R/EM students. To explore this area of research, three research questions were asked. The results pertaining to these research questions are presented in this chapter; however, a description of the sample population is presented first. Student characteristics are summarized for the full sample, and where appropriate significant differences based on academic standing are highlighted.

Preliminary Analyses

Preliminary analyses were conducted to describe the general characteristics of all the students who participated in the study. As the primary research question focused on students who were on academic probation, between-group analyses were conducted to further describe the study's sample based on academic standing. Students on academic probation are referred to herein as the "AP-Yes" group, and the "AP-No" group refers to students who were not on probation.

Students' characteristics and general background information. This section provides a summary of the background characteristics most salient to the current study; however, additional descriptive information of students' characteristics is available in the Appendices (see Appendix G). Descriptive statistics (i.e., frequencies, proportions, and means) were calculated for the Student Characteristics Scale (e.g., students' age, sex, race/ethnicity, classification, GPA, extracurricular involvements), degree of college stress and financial strain, and experience with mindfulness. In addition to descriptive information, z-test and t-test statistics will be included

when significant differences were observed by academic probation status. Additionally, there were 97 students in the AP-Yes group and 149 students in the AP-No group; however, actual *n*s differed for some of the variables.

Age, gender, race/ethnicity, and generation in college. The majority of participants (86%) were traditionally-aged college students between the ages of 18 and 23 (M = 21.07, SD = 3.76) which was representative of the mean age of UW-Madison undergraduates enrolled during fall 2013 (see UW 12-13 Fact Sheet). There was a small significant difference in mean age by academic probation status ($M_{\text{AP-Yes}}$ = 20.51, $M_{\text{AP-No}}$ = 21.70). The AP-Yes group was slightly younger than the AP-No students, t (244) = -2.37, p = .019.

There were more female (69%) than male (30%) participants, and one student identified as transgender. Chi-square analyses indicated that female students were over-represented in both the AP-Yes and AP-No subgroups, but to a much larger degree in the AP-No group, χ^2 (1, 245) = 8.60, p = .003.

Of the participants who reported race/ethnicity, the following backgrounds were represented: 2 American Indians (.7%), 10 African Americans (4%), 40 Asian Americans (14%), 23 Latina/os (8%), 21 Multiracials (7%), 158 White/Caucasians (55%), and 7 indicated that their race/ethnicity as "Not Listed" (2%). The proportion of students in each racial/ethnic category was statistically similar when examined by academic probation status. For the remainder of this chapter, only students who indicated their racial/ethnic background were included in analyses where race/ethnicity was a grouping factor.

Just under half of the participants were first-generation college students (45%), and just over half (53%) of the students had at least one primary caregiver who had obtained a Bachelor's degree or higher. The mean level of education for students' caregivers fell between "some

college" and an Associate's degree (M = 8.67, SD = 2.62). Neither mean-levels of education nor generation-in-college status varied significantly when analyzed by academic standing.

Academic classification, program/major, GPA, and standing. Most of the participants began college at UW-Madison with only 20% having transferred from another institution. A review of students' total credits earned (M = 63.38, SD = 37.19) indicated that seniors were the largest classification of students in the study (34%), followed by sophomores (28%), juniors (21%), and freshmen (17%). However, there was a large and significant difference in credits earned toward a degree based on academic probation status, t (204) = -6.95, $p < .001$. The AP-Yes students had earned significantly fewer credits ($M_{\text{AP-Yes}}$ = 43.34, $M_{\text{AP-No}}$ = 74.95). Thus, in terms of classification, there were significantly larger proportions of freshmen and sophomores in the AP-Yes group and a much greater proportion of seniors were in the AP-No group, $\chi 2$ (3, 216) = 37.06, $p < .001$. The proportion of juniors in the two groups was similar and did not significantly by AP-status.

Major. The top five majors reported by participants are listed here by AP-status as they were different for each group. The most frequent majors reported by the AP-Yes students were "undecided," followed by Biology (cross-listed), Kinesiology (School of Education), Mechanical Engineering (College of Engineering), and Genetics (College of Agriculture and Life Sciences). The top five majors for the AP-No group were Rehabilitation Psychology (School of Education), Psychology (College of Letters and Science), Social Work (College of Letters and Science), Personal Finance (School of Human Ecology), and Human Development & Family Studies (School of Human Ecology). Additionally, only one AP-No participant reported their major as "undecided".

Grades and academic standing. As expected, there was a significant difference in mean cumulative grade point average (GPA) based on academic probation status, t (238) = -14.23, p < .001 ($M_{\text{AP-Yes}}$ = 2.18, $M_{\text{AP-No}}$ = 3.16). Specifically, 36% of AP-Yes students reported a GPA of 2.0 or lower. The majority of students on probation were on probation for the first time (79%) and for one semester only (75%).

Academic and extracurricular hours. Students reported spending between 2 to 22 hours each week on academic tasks (e.g., studying; M = 15.06, SD = 5.78). There was a small but significant difference in hours spent on academic tasks by academic probation status t (228) = 2.08, p = .038 ($M_{\text{AP-Yes}}$ = 16.09, $M_{\text{AP-No}}$ = 14.51).

Hours for extracurricular involvements (e.g., clubs or sports) ranged from 1 to 23 hours per week (M = 7.92, SD = 6.19). The majority of students spent 1 to 11 hours per week with extracurricular hours (82%). The top five extracurricular activities reported by all students: service learning/community service (43%), academic/professional organizations (37%), intramural sports (19%), cultural/diversity organizations (17%), and fraternities/sororities (9%). The majority of students (58%) reported that extracurricular activities took some time from school work (M = 1.79, SD = .61). Neither time spent on extracurricular activities nor the impact of these activities on schoolwork varied significantly by academic probation status.

Money for college. The top five ways participants paid for college were: self, parental assistance, employment, student loans, and scholarships/grants. The majority of participants reported working while in school. Hours worked ranged from 1 to 22 hours per week (M = 12.36, SD = 7.41). The majority of employed students (80%) indicated that working took “some” to “a lot” of time away from schoolwork (M = 2.02, SD = .65). No significant differences were

observed by academic probation status in how students paid for college, the hours worked per week, or the impact of employment on schoolwork.

College stressors. Students rated their levels of stress for five college stressors: academic, financial, social, familial, and overall (see Table 1). A large majority of students (69%) reported feeling "very" or "extremely" stressed by academics (M = 2.85, SD = .91). More than half the participants (66%) reported feeling "stressed" to "extremely stressed" about their finances (M = 2.13, SD = 1.28). Over a quarter of the participants (27%) reported feeling "not at all stressed" socially; however, the majority of students (68%) rated their social stress between "moderately" and "very" stressed (M = 1.36, SD = 1.17). Family stress was rated as the least stressful category; more than half (65%) reported feeling "not at all" or "moderately" stressed (M = 1.29, SD = 1.21). A large majority of students (68%) described feeling "moderately stressed" to "stressed" overall at UW-Madison (M = 2.03, SD = .98); however, over a quarter (27%) felt "very" to "extremely" stressed overall at UW-Madison. There appeared to be a small to moderate significant relationship between academic probation status and the categories of academic stress ($M_{\text{AP-Yes}}$ = 3.06, $M_{\text{AP-No}}$ = 2.66) and overall stress ($M_{\text{AP-Yes}}$ = 2.20, $M_{\text{AP-No}}$ = 1.84), t_{academic} (222) = 3.411, p = .001; t_{overall} (224) = 2.85, p = .005. Students on academic probation reported higher mean scores on academic stress and overall stress when compared with their peers not on probation.

Table 1.

College Stressors – Academic, Financial, Social, Family, Overall

	AP-Yes					AP-No				
Source of Stress	Valid N	*M*	*SD*	Min	Max	Valid N	*M*	*SD*	Min	Max
Academic		3.06	.783	1	4		2.66	.974		
Financial		2.21	1.287				2.04	1.267		
Social	95	1.31	1.212	0 to 4		131	1.38	1.106	0 to 4	
Family		1.29	1.166				1.25	1.230		
Overall		2.20	.929				1.84	.943		

Note: Item response options ranged from 1 ("Not at all stressed") to 5 ("Extremely Stressed).

Students rated their degree of collegiate stress (see Table 2). Raw scores were converted to favorability scores (see Davidson et al., 2005). All participants, regardless of academic probation status, reported an unfavorable degree of collegiate stress (M = -.54, SD = .72, Cronbach α = .71). The top two categories of collegiate stress reported were (a) feeling overwhelmed by the academic workload and (b) perceiving the situation of academic probation as stressful (M = -.88, SD = .88; M = -.60, SD = .1.37, respectively). There was a small but significant difference by academic probation status as students on academic probation reported a greater degree of stress in each of the top two categories, $t_{\text{overwhelmed}}(212) = -2.05$, $p = .041$; $t_{\text{AP-stressful}}(222) = -3.62$, $p < .001$. A large and significant difference by academic probation status was also indicated in a third category of stress, "tension regarding the situation of academic probation," with students on probation reporting significantly higher tension than the AP-No students, $t(222) = -8.69$, $p < .001$ ($M_{\text{AP-Yes}} = -1.04$, $M_{\text{AP-No}} = .46$).

Table 2.

Collegiate Stress Scale

					AP-Yes			
	n	*M*	*SD*	Min	Max	Skew	Kurtosis	α
1-How often do you feel overwhelmed by the academic workload here?	95	-1.01	.831	-2	2			
2-How much do other aspects of your life suffer because you are a college student?	94	-.22	1.069	-2	2			
3-Does the situation of academic probation create tension in you?	95	-1.04	1.031	-2	1			
4-To what extent do you perceive the situation of academic probation as stressful?	95	-.93	1.003	-2	2			
5-Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution?	95	-.77	.881	-2	2			
6-How much pressure do you feel when trying to meet deadlines for course assignments?	95	-.57	.834	-2	2			
Mean Favorability Scores	95	-.76	.571	-2	1	.145	-.189	.647 (*n* = 94)
					AP-No			
1-How often do you feel overwhelmed by the academic workload here?	131	-.77	.908					
2-How much do other aspects of your life suffer because you are a college student?	130	-.18	1.00					
3-Does the situation of academic probation create tension in you?	131	.46	1.56					
4-To what extent do you perceive the situation of academic probation as stressful?	131	-.31	1.545					
5-Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution?	131	-.68	.847	-2 to 2				
6-How much pressure do you feel when trying to meet deadlines for course assignments?	131	-.66	.811					
Mean Favorability Scores	131	-.36	.763	-2	1	.081	-.757	.738 (*n*=130)

Note: Item scale = -2 (higher stress) to 2 (lower stress). Higher scores indicate a less favorable degree of collegiate stress. Data not included if respondent answered, “Not Applicable”.

Students also rated their degree of financial strain at college (see Table 3). Raw scores were converted to favorability scores (see Davidson et al., 2005), and participants reported a slightly unfavorable degree of financial strain (*M* = -.35, *SD* = .1.12, Cronbach α = .88). Students were most worried about having enough money to meet their college needs (*M* = -.56, *SD* = 1.26). No significant differences were observed for the financial strain scale or its individual items based on AP status.

Table 3.

Financial Strain Scale

	N	*M*	*SD*	Min	Max	Skew	Kurtosis	α
AP-Yes								
1-How often do you worry about having enough money to meet your needs?	90	-.70	1.240					
2-How difficult is it for you or your family to be able to handle college costs?	89	-.54	1.119					
3-When considering the financial costs of being in college, how often do you feel unable to do things...	90	-.42	1.324	-2 to 2				
4-How much of a financial strain is it for you to purchase the essential resources you need for course...	91	-.16	1.336					
Mean Favorability Scores	90	-.44	1.050			.473	-.617	.848 (*n* = 84)
AP-No								
1-How often do you worry about having enough money to meet your needs?	129	-.43	1.280					
2-How difficult is it for you or your family to be able to handle college costs?	128	-.35	1.296					
3-When considering the financial costs of being in college, how often do you feel unable to do things...	130	-.22	1.364	-2 to 2				
4-How much of a financial strain is it for you to purchase the essential resources you need for course...	127	-.05	1.356					
Mean Favorability Scores	128	-.26	1.160			.26	-1.026	.900 (*n*=123)

Note: Item scale = -2 (higher stress) to 2 (lower stress). Higher scores indicate a less favorable degree of financial strain. Data not included if respondent answered, “Not Applicable”.

Experience with meditation. Nearly half of the participants (47%) reported having no meditation experience ever, and over one-fifth had meditation experience ranging from monthly to weekly during the previous six months (21%; $M = 1.18$, $SD = 1.35$; see Table 4). There was a small but significant mean-difference in amount of meditation experience based on AP-status, with AP-Yes students reporting less experience than AP-No students, $t\ (223) = -2.63$, $p = .009$ (Cohen's $d = -.35$, effect size $r = -.17$). When examined more closely, a significantly larger proportion of AP-Yes than AP-No students described their meditation experience as "none ever", $\chi^2\ (4, 225) = 16.63$, $p = .002$ ($_{\text{AP-Yes}} = 61\%$, $_{\text{AP-No}} = 38\%$).

Table 4.

Experience with Meditation

	AP-Yes						AP-No					
	n	Valid %	*M*	*SD*	Min	Max	*n*	Valid %	*M*	*SD*	Min	Max
0: None ever	58	61.1					48	36.9				
1: None in the past 6 months	13	13.7					24	18.5				
2: Less than once per month	7	7.4					28	21.5				
3: 1 to 3 times per month	9	9.5					21	16.2				
4: At least once per week	8	8.4					9	6.9				
	95	100.0	.91	1.353	0	4	130	100	1.38	1.313	0	4

Note:

Research Question One

The primary research question investigated was, "For undergraduates on academic probation, what is the relationship (correlational and predictive) between psychosociocultural non-cognitive variables (i.e., stress appraisal and coping, mentor support, college environment

perceptions, and everyday mindfulness) and the criterion variable of college persistence (i.e., degree and institution commitments)?" It was hypothesized that the PSC variable set would be significantly correlated with and predictive of students' persistence decisions. The basic psychometric properties and correlational relationships of the major variables are detailed first. Then, predictive analyses will be described.

Psychometric Properties and Correlational Relationships for the Major Variables. Descriptive statistics (i.e., means and standard deviations, normality, and reliability) were computed to ascertain that data met the basic assumptions for the hypothesis-testing analyses selected for the study (see Table 5 and Table 6). A review of the 80%-mean scores and 5%-trimmed mean scores indicated no extreme differences in means when the lowest and highest case scores were removed. Skewness and kurtosis statistics and their corresponding histograms were reviewed and determined to be within adequate range for all scales (i.e., less than |2|). Adequate reliability was indicated for all scales (Cronbach's αs = .756 to .904) and consistent with findings of similar research (see Chapter III). Thus, data were determined to meet the basic assumptions of normality and to be appropriate for hypothesis-testing procedures. The next sections will present the descriptive data and correlational data (see Table 7) obtained from the AP-Yes group for the predictor and criterion variables.

Table 5.

Scale Descriptives: Means and Standard Deviations

Instrument (*n* items)	AP-Yes					AP-No				
	Valid *n*	*M*	*SD*	Min	Max	Valid *n*	*M*	*SD*	Min	Max
SAM-R-Modified										
Challenge (7)	93	3.06	.683	1	4					
Threat (5)	93	2.27	.744	0	4					
Centrality (4)	91	1.93	.834	0	4					
Resources (2)	91	2.96	.961	0	4					
CSI-R-Modified										
Situational (8)	89	2.82	.705	1	4					
Self-Restructuring (8)	88	2.66	.724	1	4					
Acceptance (9)	88	1.92	.766	0	4					
Tension (8)	88	1.76	.800	0	4					
Meaning (4)	87	2.58	1.04	0	4					
MS-Modified (5)	92	2.69	.688	1	4	127	2.87	.684	1	4
UES (14)	91	3.65	.889	0	5	127	4.02	.832	1	6
MAAS (15)	91	3.53	.842	1	6	128	3.54	.777	1	6
CPQ-R-Modified (10)	92	4.31	.555	3	5	127	4.53	.466	3	5

Note: SAM=Stress Appraisal Measure. CSI=Coping Schemas Inventory. MS =Mentoring Scale. UES=University Environment Scale. MAAS=Mindful Attention Awareness Scale. CPQ=College Persistence Questionnaire.

Table 6.
Scale Descriptives: Normality and Reliability

Instrument	Shapiro-Wilk	*df*	Sig.	Skewness	*SE*	Kurtosis	*SE*	Cronbach's α
				AP-Yes				
SAM-R-Modified								
Challenge	.952	93	.002	-.621**	.250	.292	.495	.821
Threat	.978	93	.115*	-.330	.250	.708	.495	.772
Centrality	.981	91	.214*	.156	.253	.070	.500	.730
Resources	.874	91	.000	-1.050**	.253	1.106**	.500	.870
CSI-R-Modified								
Situational	.972	89	.050	-.294	.255	-.462	.506	.893
Self-Restructuring	.964	88	.016	.237	.257	-.673	.508	.875
Acceptance	.941	87	.001	.114	.258	.007	.511	.801
Tension	.987	88	.538*	.423	.257	.117	.508	.818
Meaning	.980	88	.205*	-.532**	.257	-.436	.508	.904
MS-Modified	.978	92	.125*	-.237	.251	-.286	.498	.846 (*n*=92)
UES	.969	91	.030	-.544**	.253	1.081**	.500	.794 (*n*=88)
MAAS	.992	91	.865*	-.083	.253	.246	.500	.861 (*n*=90)
CPQ-R-Modified	.913	92	.000	-.867**	.251	.052	.498	.756 (*n*=84)
				AP-No				
MS-Modified	.972	127	.009	-.308	.215	-.445	.427	.844 (*n*=127)
UES	.972	127	.010	-.627**	.215	.500	.427	.795 (*n*=121)
MAAS	.991	128	.584*	-.082	.214	.511	.425	.874 (*n*=125)
CPQ-R-Modified	.845	127	.000	-1.670**	.215	3.594**	.427	.726 (*n*=113)

Note: * Shapiro-Wilk statistic significant if p-value > .05; Skewness and Kurtosis statistics significant if statistic > (2 x *SE*)

Table 7.

Pearson Bivariate Correlations for Criterion and Predictor Variable Scales

		AP-Yes												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	CPQ-R-Modified	-	.382*	-.411*	-.261**	.191	.165	.179	.120	.019	.132	.432*	.560*	.307*
	SAM-R-Modified													
2	Challenge			-.356*	-.354*	.418*	.489*	.572*	.324*	.132	.156	.381*	.351*	.394*
3	Threat				.604*	-.091	-.081	-.129	.042	.108	-.189	-.287*	-.442*	-.237**
4	Centrality					-.241**	-.136	-.201	-.144	-.149	-.285*	-.331*	-.461*	-.286*
5	Resources						.266**	.440*	.366*	.292*	.368*	.292*	.330*	-.058
	CSI-R-Modified													
6	Situational							.836*	.488*	.280*	.435*	.413*	.354*	.309*
7	Self-Restructuring								.506*	.390*	.508*	.362*	.344*	.194
8	Meaning									.419*	.511*	.246**	.182	.269**
9	Acceptance										.502*	.183	.157	-.041
10	Tension											.341*	.374*	.157
11	MS-Modified												.424*	.351*
12	UES													.274*
13	MAAS													-
		AP-No												
1	CPQ-R-Modified											.408*	.554*	.12
11	MS-Modified												.366*	.146
12	UES													.236*
13	MAAS													-

Note. *Correlation is significant at the 0.01 level (2-tailed). **Correlation is significant at the 0.05 level (2-tailed). SAM = Stress Appraisal Measure. CSI = Coping Schemas Inventory. MS = Mentoring Scale. UES = University Environment Scale. MAAS = Mindful Attention Awareness Scale. CPQ = College Persistence Questionnaire. Statistics were calculated with 80% mean scale scores.

Stress appraisals. Students were asked to appraise the situation of being on academic probation. Three primary appraisal types were investigated: Challenge (*M* = 3.06, *SD* = .68, α = .821), Threat (*M* = 2.27, *SD* = .74, α = .772), and Centrality (*M* = 1.93, *SD* = .83, α = .730). All three primary appraisals were significantly correlated with persistence. Challenge-type appraisal was positively correlated with persistence (*r* = .38). Threat- and resources-type appraisals were negatively correlated with persistence (*r* = -.41 and *r* = -.26, respectively). One secondary appraisal type investigated: Resources (*M* = 2.96, *SD* = .96, α = .870), which was not significantly correlated with persistence commitments. The scale was initially 3-items; however, to obtain adequate internal consistency, only two items were retained for analyses.

Stress coping strategies. Five categories of stress coping were assessed in this study: situation-, self-restructuring- , meaning-, acceptance-, and tension-based coping. Internal reliability coefficients were calculated, and adequate reliability was indicated for each category (Cronbach's αs = .801 to .904). The top three coping categories reported were situational (*M* = 2.82, *SD* = .71, α = .893), self-restructuring (*M* = 2.66, *SD* = .72, α = .875), and meaning (*M* = 2.58, *SD* = 1.04, α = .904). Acceptance-based coping and tension-based coping had the lowest category means (*M* = 1.92, *SD* = .77, α = .801; *M* = 1.76, *SD* = .80, α = .818, respectively). None of the coping strategy categories were significantly correlated with persistence commitments. Thus, coping strategies were not included in additional analyses related to the criterion variable. However, as proposed, coping strategy categories were examined to assess their associations with the other predictor variables. These correlational relationships are summarized next.

Situational coping was positively and significantly correlated with Challenge- and Resource-based stress appraisals, perceptions of mentoring, comfort in the university

environment, and everyday mindfulness (*r*s = .27 to .49). Self-restructuring was positively correlated with Challenge- and Resource-based stress appraisals, perceptions of mentoring, and perceptions of the university environment (*r*s = .34 to .57). Meaning-based coping strategies were correlated with Challenge- and Resource-based stress appraisals, perceptions of mentoring, and everyday mindfulness (*r*s = .25 to .37). Acceptance-based coping was positively correlated with only one variable, the secondary appraisal factor of perception of coping resources (*r* = .29). Tension-based coping was negatively correlated with centrality-based appraisals, and positively correlated with the secondary appraisal of coping resources, mentoring perceptions, and perceptions of the university environment (*r*s = -.29 to .37).

Perceptions of mentoring. To examine the social dimension of the PSC framework, this study examined students' perceptions of mentoring. Descriptive statistics were calculated for the Mentoring Scale (MS). The scale mean was 2.69 (*SD* = .69), and internal consistency reliability appeared adequate (Cronbach's α = .846). Correlational analyses indicated that students' perceptions of mentoring were significantly and positively correlated with persistence (*r* = .43); also, mentoring had the second largest correlation with persistence. Students' perceptions of mentoring were positively and significantly correlated with four of the predictor variables: challenge-based and resources-based appraisals of stress, greater comfort in the university environment, and a greater degree of everyday mindfulness (*r*s = -.29 to .42).

Perceptions of the university environment. To examine the cultural dimension of the PSC framework, two variables were measured: perceptions of the university environment and everyday mindfulness. Preliminary statistics of the University Environment Scale (UES) indicated a scale mean of 3.65 (*SD* = .89) and adequate internal consistency reliability (Cronbach's α = .794). Of all the PSC predictor variables, perceptions of the university

environment had the largest positive correlation with persistence (*r* = .56). Students' perceptions of the environment were positively and significantly correlated with challenge-based stress appraisals, having resources to cope, more positive perceptions of mentoring, and higher everyday mindfulness (*r*s = .27 to .42). Additionally, perceptions of the environment were negatively and significantly correlated with threat- and centrality-based appraisals of stress (*r*s = -.44 and -.46, respectively).

Everyday mindfulness. Preliminary statistics for the Mindfulness Awareness Attention Scale (MAAS) indicated a scale mean of 3.53 (*SD* = .84) and adequate internal consistency reliability (Cronbach's α = .861). Support was obtained for the hypothesis that higher reports of mindfulness would be positively correlated with persistence (*r* = .31). Additionally, everyday mindfulness had a positive and significant correlation with challenge-type stress appraisals, more positive perceptions of mentoring, and more positive perceptions of the university environment (*r*s = .27 to .39). Everyday mindfulness was negatively correlated with threat- and centrality-based stress appraisals regarding being on academic probation (*r*s = -.24 and -.29, respectively).

To further explore the PSC-based variable of *everyday mindfulness*, posthoc analyses were used to examine the question, "Is there an association between everyday mindfulness and AP-Yes students' experiences with meditation?" Correlational analyses indicated that students' experiences with meditation were not significantly correlated with mindfulness (as measured herein).

Persistence commitments. To examine students' persistence commitments, preliminary statistics for the College Persistence Questionnaire (CPQ-R-Modified) were computed. The mean scale score was 4.31 (*SD* = .56). Adequate internal consistency reliability was observed (Cronbach's α = .756). Students' scores indicated a high level of persistence (as measured by

commitments to the degree and to the university). To summarize the correlational relationships described above, persistence commitments appeared to have positive and negative correlations with the predictor variables. Six variables were significantly and positively correlated with more favorable persistence commitments: increased comfort in and more positive perceptions of the college environment, positive perceptions of college mentoring, increased challenge-type stress appraisals, higher report of everyday mindfulness, and more positive perceptions of access to stress coping resources (*r*s = .56, .43, .38, .31, .19, respectively). Persistence commitments were negatively correlated with higher reports of threat-type and centrality-based appraisals regarding the stress of being on academic probation (*r*s = -.41, -.26, respectively). All of the significant correlational associations matched in the hypothesized directions.

Predictive relationships between the PSC-based variables and persistence. It was hypothesized that the PSC-based variables of stress appraisals, mentoring beliefs, perceptions of the college environment, and everyday mindfulness would be predictive of students' degree- and university-persistence commitments. To test this hypothesis, SPSS was utilized to calculate a standard linear regression between the criterion variable of persistence and a PSC-based predictor variable set that included stress appraisals, mentoring perceptions, university environment perceptions, and everyday mindfulness.

Scale correlations and multicollinearity statistics were reviewed to determine that variables were adequately but not excessively related (Pallant, 2010). All predictor variables were significantly correlated with persistence (*r*s = -.28 to .57) and with one another (*r*s = -.46 to .61). Collinearity statistics indicated that the variables were adequately but not excessively inter-correlated (Tolerance = .56 to .78; VIF = 1.28 to 1.80).

A review of the residuals plots indicated that normality assumptions appeared to be met. The normal p-p plot held a straight line, and the scatter plot showed values falling within the standard deviations related to normality. The Mahalonobis distance statistics were reviewed to determine whether outlier cases should be removed (Min = 1.03, Max = 26.45), and no casewise outliers were observed, χ^2 (6) = 22.46 (M = 5.93, SD = 4.58).

Regression statistics provided support to reject the null hypothesis that the PSC framework variables would not be predictive of persistence (see Table 8). The ANOVA results supported the alternative hypothesis that the PSC variable-set would be predictive of persistence commitments, $F(6) = 11.35$, $p \leq .001$. Further, the regression analyses indicated that 42% of the variance in persistence was explained by stress appraisals, perceptions of mentoring, comfort in the university environment, and everyday mindfulness (Adjusted $R^2 = .419$).

To determine the unique contribution and predictive relationship between persistence commitments and the predictor variables, the standardized Beta coefficients and semi-partial (part) correlation coefficients were examined. Students' comfort in the university environment (as measured by the UES) appeared to provide the largest unique contribution to persistence commitments (9%). Stress appraisals were also significantly predictive of and unique contributors to variance in persistence; however, threat-type appraisals contributed most to variance in persistence commitments (5%). The social dimension variable (perceptions of college mentoring) and one of the cultural dimension variables (everyday mindfulness) did not appear to have significant unique contributions in predicting variance in persistence.

Table 8.

Linear Regression: PSC-variable set and persistence (AP-Yes)

	Standardized Beta Coefficients	Part Correlations (%)	Adjusted R^2
UES	.376 *	9.1	.419^{+}
SAM-Threat	-.278 **	4.5	
SAM-Challenge	.219 ***	2.9	
SAM-Centrality	.200 **	2.7	
MS-Modified	.176	-	
MAAS	.049	-	

Note: * p<.001; ** p<.05; *** p=051; $^{+}$ F(6) = 11.353, $p < .05$

Controlling for students' perceptions of the university environment. As students' perceptions of the college environment were most highly correlated with and significantly predictive of persistence, a post-hoc analysis was conducted to examine the relationship between the other PSC variables and persistence after controlling for perceptions of the environment. Hierarchical multiple regression analyses were conducted. Preliminary statistics from these analyses were reviewed to determine that the general assumptions of the regression tests were met. Tolerance and VIF statistics indicated that the variables had some correlation with one another but that multicollinearity was not an issue (Tolerance = .79 to .93; VIF = 1.08 to 1.27). The Mahalanobis distance statistics were reviewed (Min = 1.15, Max = 30.48), and two cases were determined to be outliers, χ^2 (6) = 22.46. After excluding the outlier cases, the linear regression was conducted again. There appeared to be no significant difference in the predictive model when controlling for students' perceptions of the university environment.

Research Question Two

In addition to the primary research question, a secondary research question was analyzed: "Are there significant between-group and within-group differences in the relationships between

the non-cognitive predictor variables and the criterion variable when examined by race/ethnicity and/or by academic probation status?"

Group comparison one: Race/ethnicity within academic probation-yes. Independent samples t-tests were calculated to compare mean scale scores by race/ethnicity within the AP-Yes group (n_{REM} = 35, $n_{Non\text{-}REM}$ = 57). There were no significant differences indicated for the predictor variables (i.e., stress appraisals, coping strategies, mentoring support, perceptions of the college environment, everyday mindfulness) or the criterion variable (i.e., persistence commitments).

Group comparison two: Academic probation status. Independent samples *t*-tests were calculated to compare mean scale scores by academic probation status for the predictor and criterion variables. The psychological variables of stress appraisals and coping strategies were excluded from these analyses as those instruments were administered only to students on academic probation. Of the three remaining PSC-based predictor variables (perceptions of mentoring, perceptions of the college environment, and everyday mindfulness), only students' perceptions of the college environment was significantly different by AP-status, t (216) = -3.16, p = .002 ($M_{AP\text{-}Yes}$ = 3.65, $M_{AP\text{-}No}$ = 4.02). Students on academic probation reported a somewhat less-positive perception of the environment. Additionally, although both groups reported high mean-scores for persistence commitments, the AP-No students' scores were somewhat but significantly higher, t (217) = -3.13, p = .002 ($M_{AP\text{-}Yes}$ = 4.31, $M_{AP\text{-}No}$ = 4.53).

Group comparison three: Racial/ethnic minorities and academic probation status. The final planned comparison was a between-groups analysis of the criterion and predictor variables for racial/ethnic minority students based on AP-status. A small but significant difference was indicated regarding students' perceptions of the university environment, with

R/EM students in the AP-Yes group reporting less positive perceptions of the college environment, t (69) = -1.97, p = .05 ($M_{\text{AP-Yes}}$ = 3.44, $M_{\text{AP-No}}$ = 3.87).

Group comparison four: Race/ethnicity and academic standing. A post-hoc comparison was conducted to examine the relationship between academic probation status, race/ethnicity, and academic persistence. A two-way ANOVA was conducted with race/ethnicity and academic probation status as independent variables and persistence (as measured by the CPQ) as the dependent variable. First, the main effects statistic was reviewed and indicated a small but significant difference in students' persistence commitments when race/ethnicity and AP-status were examined together, $F(3) = 2.70$, p = .05. However, academic probation status was the only significant factor in the model, $F(1) = 1.81$, p = .008, with students in the AP-No group reporting slightly higher persistence (M_{APYes} = 4.31, M_{APNo} = 4.53). The interaction statistic between race/ethnicity and AP-status was not found to be significant.

Chapter V

Discussion

This chapter provides a discussion of the study's findings within the context of the educational and psychological literature. First, the research questions and hypotheses are summarized and the related findings are compared and contrasted with the findings reported in other psychosociocultural (PSC) based or related studies. Then, implications for counseling psychology and higher education are provided. Lastly, the study's limitations are addressed and recommendations for future research provided.

Overview

As highlighted in the introductory chapter, obtaining a college degree continues to be an important gateway to gainful employment and economic stability. There is currently a national push at the federal and state level to increase postsecondary educational achievement. Some reasons for this push include: (a) an increased need for a bachelors-level workforce that is adequately prepared for employment in high-demand sectors (e.g., science, technology, engineering, math, and medicine; Carnevale et al., 2010), (b) higher income for those with post-secondary degrees (Carnevale et al., 2010), and (c) lower rates of college persistence and increased time-to-degree for racial/ethnic minority (R/EM) undergraduates than for non-R/EM students (Aud et al., 2011; Berube, 2009; http://nces.ed.gov/).

A psychosociocultural (PSC) framework of college success was developed by Gloria and Rodriguez (2000) to describe the cognitive and non-cognitive factors that contribute to the college retention and persistence of R/EM students. The framework has been a useful model for

researchers examining a variety of inter-related variables (e.g., college self-efficacy, peer and family relationships, and college stress) that individually and together promote persistence.

Within the context of the PSC framework, unsatisfactory academic standing may be a potential *barrier* to degree attainment. Thus, this study investigated a PSC-based model of college persistence wellness that examined several non-cognitive factors (i.e., stress and coping strategies, mentoring, college environment perceptions, and mindfulness experiences) to ascertain their role in propelling the persistence commitments of undergraduates on academic probation. More specifically, as non-cognitive factors have been implicated in R/EM students' longer time-to-degree and lower graduation rates compared with their non-R/EM peers, the demographic subset of R/EM students on academic probation was deemed an especially important group for continued research into the factors that facilitate their college persistence wellness.

This chapter elaborates upon the study's findings. The relationships between the PSC-based predictor variables and the criterion variable of persistence (i.e., as measured by degree and institution commitments) are highlighted. Then, systems-level and student-level implications pertaining to the findings are discussed. The limitations of the study are described and recommendations for future research are provided.

Psychosociocultural predictors of persistence

This study hypothesized that, for students on academic probation, the PSC-based non-cognitive factors of challenge-type stress appraisals, social support for college (i.e., through mentors), more positive perceptions of the college environment, and a greater degree of everyday mindfulness while at college, would be positively associated with and predictive of academic persistence commitments. As expected, the PSC non-cognitive variables were significantly

correlated with and predictive of persistence, both as a variable-set and individually (i.e., challenge-based appraisals, positive perceptions of college mentoring, more positive perceptions of and comfort in the college setting, and a greater degree of everyday mindfulness).

Appraising the stress of being on academic probation. As recommended by other researchers, the current study examined the stress response construct via two variables: stress appraisals and stress coping strategies (see Wong, 1993; Wong et al., 2006; Gloria et al., 2009). This section discusses the findings related to students' appraisals of being on academic probation.

Four types of stress appraisals were measured: challenge, threat, centrality, and resources. As hypothesized, challenge-based appraisals of being on academic probation appeared to be positively associated with persistence commitments. Alternatively, students who had higher threat-based appraisals and lower resource-based appraisals of being on academic probation reported more unfavorable persistence commitments. Indeed, threat-based stress appraisals made the second largest unique contribution to persistence commitments (after perceptions of the college environment) when included in the PSC variable-set. Threat-based appraisals were also negatively correlated with the cultural-dimension variables of comfort in the college environment and everyday mindfulness.

These findings are in accordance with extant literature. For example, in their research pertaining to relaxation and stress, Lehrer and Woolfolk (1993) identified *cognitive relaxation* as an important area of skill development. The authors further described the skill of cognitive relaxation as a positive stress response whereby persons who exhibit higher degrees of the skill appear better able to "react to changes in the environment with curiosity, acceptance, and interest rather than with threat" (p. 421). However, cognitive relaxation may be more easily developed

for some stressors than others, as the concept of *acceptance* is complex when considered within a PSC-based (multicultural, positive psychology) framework of persistence wellness. From a sociocultural perspective, it is reasonable that the stress of being on academic probation would be appraised as a *threat* when the consequences related to probation may ultimately be an involuntary departure from college—and, subsequently, the possibility of lower earning potential and being less competitive in the current job market. Given that academic probation may increase students' time-to-degree, and that students on probation reported feeling "very" to "extremely" stressed from finances, it was surprising that threat-based appraisals were not reported to an even greater degree than they were. However, the findings of the current study indicated that despite financial, collegiate, and academic probation stress, students on academic probation still had favorable persistence commitments. It would seem then that when students perceive that they have an adequate amount of psychological, social, and cultural resources, then these resources together function as a protective network for the healthy management of threat-based appraisals as well as the promotion of more positive persistence commitments.

Strategies for coping with the stress of being on academic probation. Hypotheses regarding relationships between stress appraisals and coping strategies were not specified a priori (see Peacock & Wong, 1990). Instead, this researcher was interested in observing the *resource-congruent* relationships between the appraisal types and coping categories for the population and stressor examined. More specifically, this study sought to learn more about the coping strategy categories (i.e., situation, self-restructuring, meaning, acceptance, tension) used by students in response to their appraised stress of being on academic probation.

First, challenge-based appraisals were positively associated with three of the coping categories: self-restructuring, situational, and meaning. This relationship has been similarly

reported in other PSC-based research of students' stress processes (see Gloria et al., 2005 and Gloria et al., 2009). For example, Gloria et al. (2005, 2009) investigated the PSC-based factors thought to promote psychological well-being for Latina(o) students. The authors observed a significant relationship between students' psychological well-being and students' use of *planned action* and *learning from past experiences* in their efforts to cope with college stress (Gloria et al., 2005; Gloria et al., 2009). These coping categories appear similar to situational coping (e.g., "Make a plan of action and follow it") and meaning-based coping (e.g., "I derive meaning from my past"). As such, the findings of the current study appear consistent with other PSC-based studies. Second, threat-based appraisals were significantly associated with tension-based strategies. This finding was consistent with Wong, Wong, and Scott's (2006) assertion that personally transformative coping strategies may be an appropriate response when faced with stressors experienced as threatening. Third, and as would be expected, the secondary appraisal category of resources was positively associated with all of the coping strategy categories.

College mentoring. The social dimension of the PSC-framework was examined via the construct of social support for college. The specific social support variable investigated was students' perceptions of mentoring (as measured by the Mentoring Scale; Gloria, 1993; Gloria et al., 1999). As hypothesized, and congruent with extant literature on mentoring and persistence (e.g., Gloria et al., 1999; Bordes et al., 2006), students who endorsed more positive perceptions of mentoring for college also reported more favorable persistence commitments.

Additionally, mentoring support was associated with challenge-based appraisals of being on academic probation and the perception that resources were available for coping. Moreover, students who reported more positive mentoring beliefs also endorsed using four of the five coping strategy categories (Situational, Self-Restructuring, Meaning, and Tension) to manage the

stress of being on academic probation. These findings are consistent with those findings reported by Phouybanhdyt (2011) where students on academic probation who reported more positive perceptions of mentoring also had more positive perceptions regarding accessibility and quantity of campus resources. Similarly, Lehrer and Woolfolk (1993) observed that "numerous studies strongly indicate the significance that the immediate social milieu holds for health and well-being" (p. 346). The current study extends these findings in relationship to the experiences of students on probation. Specifically, positive perceptions of mentoring appeared to play an important role in students' persistence commitments through students' access to a greater variety of personal and campus-based strategies for coping with the situation of being on probation. As such, this study has provided additional support for the important relationships among mentoring, the stress response, and students' academic persistence commitments.

Perceptions of and comfort in the college environment. To examine the cultural dimension construct of students' comfort in the college environment, the University Environment Scale (UES; Gloria & Robinson Kurpius, 1996) was used. As hypothesized, more positive perceptions of and comfort in the college environment were significantly associated with students' persistence commitments. Moreover, students' perceptions of the university environment contributed most to the variance in and prediction of persistence commitments.

The importance of the university environment has been established as a significant factor in college students' success. In the context of a PSC-based model of persistence wellness for students on academic probation, a college setting that is welcoming and supportive of all of its students is influential in either promoting or functioning as a barrier to students' persistence wellness. Although the variable of students' perceptions of and comfort in the college environment was important on its own, it was also evident that the PSC variable-set provided the

best description of the relationship between students' persistence commitments and the noncognitive variables examined herein.

Everyday mindfulness. The cultural-dimension variable of everyday mindfulness was measured with the Mindful Awareness and Attention Scale (MAAS; Brown & Ryan, 2003). Everyday mindfulness was defined herein as a "naturally occurring characteristic" or dispositional phenomenon of paying attention to internal and external experiences of the present moment (Brown & Ryan, 2003). In the current study, it appeared that everyday mindfulness was significantly related to the internal and external experiences measured. A greater degree of everyday mindfulness was associated with more Challenge-based appraisals of being on academic probation, greater use of Situational and Meaning-based coping strategies, more positive perceptions of mentoring support, and more positive perceptions of the university environment.

As noted by researchers who have examined mindfulness-based processes, practices, and outcomes, mindfulness has previously been associated with self-regulation and attention (Bishop et al., 2004; Shapiro et al., 2006), fewer automatic stress reactions (Kabat-Zinn, 2005), and "a wider, more adaptive range of coping skills" (Shapiro et al., 2006, p. 380). Thus, it was surprising that everyday mindfulness was not significantly related to the other three coping categories: self-restructuring, acceptance-focused, and tension-focused coping. One possible explanation for this finding is that the current study examined dispositional mindfulness rather than mindfulness as a skill or practice. Indeed, outcome research pertaining to mindfulness-based interventions indicates that a more significant relationship might be observed between everyday mindfulness and stress coping if examined with students currently engaged in more formal

efforts to cultivate mindfulness—such as students participating in a mindfulness-based stress reduction course (see Brown & Ryan, 2003; Kabat-Zinn, 2005; Oades et al., 2011).

As hypothesized, students' who reported a greater degree of everyday mindfulness also endorsed more favorable persistence commitments. However, it was surprising that of all the predictors of persistence commitments examined, the variable of everyday mindfulness (a) had the smallest association with persistence, and (b) did not appear to provide a unique individual contribution to variance in students' persistence commitments. This finding does support perspectives on student persistence that emphasize external factors or conditions that are instrumental in understanding the barriers to persistence wellness. This finding is also consistent with the finding observed in the current study where students' perceptions of the college environment and of mentoring support (i.e., external factors) appeared to be most positively associated with students' persistence commitments.

Implications

This study sought to examine several factors thought to have a positive influence on the college going experiences of students on academic probation. More specifically, a psychosociocultural model of persistence wellness was investigated. Consistent with Gloria's perspective on the utility of using the PSC model in research that takes into account "the whole student…within the context of the university environment," findings from this study provide additional information about several non-cognitive variables that appeared to contribute to the *how* of college persistence for students on academic probation (see Castellanos & Gloria, 2007). Similarly, Wong, Wong, and Scott (2006) encouraged psychologists to consider the importance of both *cultural transformation* and *personal transformation*. As such, implications are discussed that include schools as well as students.

Student success researchers have consistently called for increased accountability from colleges and universities in contributing to students' success (e.g., Tinto, 2006; Minor, Jackson, Conrad, & Williams, 2010). The findings obtained in the current study indicate that schools may be able to contribute to the persistence wellness of students on academic probation by addressing issues related to college stress and coping, increasing college mentoring, attending to factors that increase students' sense of comfort at the university, and increasing everyday mindfulness.

Wong, Wong, and Scott (2006) noted the importance of cultural transformation in the context of "macro-stress management, because it is aimed at a complete overhaul of the total environment rather than the solution of specific problems" (p. 3). College and university-level initiatives that address cultural transformation have the potential to reach and increase the academic persistence wellness of a larger segment of the college community. For example, students on or at-risk of academic probation may benefit from increased awareness of and participation in university-wide initiatives designed to enhance awareness and cultural competence at the individual and community levels. At UW-Madison, cross-campus diversity dialogues afford students the opportunity to discuss aspects of the campus community environment that have been difficult for or surprising to students. As the program for diversity dialogues has expanded to include affinity-group and more intentionally focused inter-group conversations, R/EM students on academic probation may benefit from having a diversity dialogue of their own that allows students to obtain support from one another and to develop an awareness of academic probation as an important issue both personally as well as institutionally.

Minor et al. (2010) stated that "strategic, state-level investment" is needed in the development of university-level policies designed (a) to increase an "ethos of welcoming support" for R/EM students, and (b) to serve as the foundation for the *how* of degree attainment

in “accomplishing the nation’s big goal.” Unfortunately, it can be difficult for universities to sustain or obtain the human and financial capital needed to develop and maintain student success initiatives. College comfort had the largest correlation with and unique predictive contribution to persistence commitments in the current study; thus, it would appear that institutional accountability in creating a positive university environment more conducive to students’ persistence wellness remains a challenge. As such, continued development and support of federally- and locally-funded programs designed to increase students’ sense of belongingness and engagement are recommended (see also, Oades et al., 2011).

Two programs at UW-Madison serve as potential models of persistence wellness initiatives designed to provide personal, social, cultural, and academic support for students on academic probation and for R/EM students. Counseling psychologists at UW-Madison have developed the university-wide Academic Enhancement Seminars (AES) for undergraduates on academic probation, and the Educational Effectiveness seminars offered to Center for Educational Opportunity (CeO) students. These are *high-impact* programs in that they reach a large number of students and use minimal resources. The AES and CeO seminars contribute to the persistence wellness of students on academic probation and/or of under-represented students through: personal transformation-related activities (e.g., diversity dialogues, self-exploration), increased awareness, access, and use of campus resources (e.g., presentations regarding academic and personal success resources, stress management activities), increased social support and mentoring (e.g., small group activities and one-on-meetings with course instructors), and self-assessment (e.g., self-directed and personalized action plans that are congruent with students’ goals and needs). Graduate-level instructors are trained by faculty, CeO program administrators, and one another in the provision and development of the seminars; they also

receive a stipend for their work as teaching assistants. The contributions of graduate-level psychologists-in-training made to these programs helps to reduce the operational costs of the programs. Too, the psychologists-in-training who facilitate the seminars are engaged in a unique opportunity for increased cultural competence and professional development that can help broaden trainees' scientist-practitioner development. These seminars demonstrate the impact that psychologists can have within colleges and universities in the development of institution-level initiatives that address the psychosociocultural non-cognitive factors that promote students' persistence through high-impact resources to students but low-impact costs to institutions.

Given the limited resources available to institutions, a system-wide assessment of need may be recommended to obtain data that will provide further support for the use of institutional resources in the maintenance and expansion of persistence wellness-based programming and cross-campus initiatives designed specifically for students on academic probation. As an example, data regarding academic probation was difficult to obtain for the current study. At UW-Madison, individual schools/colleges and diversity programs maintain academic standing and retention data about their students. This has the potential to reduce institution-wide knowledge about the student-level and university-level contributing factors that influence satisfactory academic standing and academic probation. Thus, centralized data gathering and analysis regarding academic probation is recommended.

A centralized database pertaining to academic standing, academic probation, time-to-degree, and graduation rates might prove to be a valuable resource for university administrators and student affairs professionals, who frequently need to show their stakeholders the statistical evidence that supports current initiatives or the development of new programming and resources. Too, given the retention and time-to-degree disparities between R/EM and non-R/EM students

reported by student development researchers and university data analysts, a centralized database of academic standing and degree completion information might further help universities to see the impact that students' leaving can have on universities' economic concerns as well as on the ability for universities to increase and/or maintain the multicultural diversity of its students. For example, if R/EM students are on academic probation at different rates than non-R/EM students, and if R/EM students on academic probation appear more likely to leave an institution or leave college completely compared with their non-R/EM peers, then the data gathered about these students could shed light on an institutional need to investigate not only why these students are leaving but also in what ways the institution could reduce such leaving.

Further, additional assessment of the problem of probation may indicate a need for initiatives designed to address the experiences of second-year students. In the current study, sophomores were over-represented in the academic probation group when compared with students not on probation. Individual schools and colleges may offer classification-specific programming (e.g., Sophomore Experience); however, university-level initiatives designed to address the unique challenges in persistence wellness across classifications are recommended. For example, degree-seeking students with lower GPAs or fewer credits earned may be *at-risk* for unsatisfactory academic progress (Cuseo, n.d.; Simon & Tovar, 2006). It should be noted that this description of at-risk is not based on student demographic descriptors (e.g., race/ethnicity or family income). Rather, this definition of at-risk encourages a complex understanding of student and university factors that may interact and thus contribute to risk for unsatisfactory academic standing. In sum, persistence wellness initiatives, and probation-risk prevention and intervention initiatives are needed that focus on cognitive and non-cognitive factors as well as students and institutions (e.g., students' beliefs and behaviors, university resources and climate).

Utsey et al. (2000) recommended that for externally-originating stressors (e.g., sociocultural climate), it is important to increase our understanding of the "coping behaviors that effectively ameliorate…potentially harmful psychological and somatic consequences" (p. 72). For this study, the stress construct was conceptualized as the stress appraisals and coping strategies used by college students to respond to college-setting demands and goals (e.g., maintaining satisfactory academic progress, managing health and well-being, sociocultural engagement, personal and career development, degree completion).

The relationship between self-restructuring coping strategies and challenge-based appraisals is consistent with existing theory and research on the positive role of self-image and self-esteem in increasing resiliency and managing stress (see Turner & Roszell, 1994). This relationship is also consistent with Wong, Wong, and Scott's (2006) description of personal transformation as a coping strategy for managing stressors appraised as threatening, such as in situations that are "chronic and beyond personal control" (p. 3). In this light, students who experience greater threat-based appraisals and less favorable persistence commitments may especially benefit from campus-supported programs that promote the development of transformation-based strategies. Further, these strategies may help to increase challenge-based appraisals, which in turn activate the use of coping resources and ultimately may enhance persistence. Given the many types of stressors for college students, and given that students within all four classifications endorsed having potentially suboptimal levels of collegiate stress, universities must continue to develop and advertise student- and stressor-congruent initiatives that are presented to students frequently, throughout their college careers, and through media appropriate to students' preferences about information and learning (e.g., technology-based tools such as video, blogs, and social media).

Limitations

Next, limitations pertaining to the sample, generalizability of findings, and measurement are discussed.

Sample. An indirect method of participant recruitment was used in this study, whereby campus partners for recruitment (e.g., advisors and instructional staff) forwarded the study materials to their students via in-class announcements, learning technology (i.e., Learn@UW), and social media (e.g., program Facebook pages). Recruitment partners generously afforded this researcher with the only means of obtaining participants for this study, as direct contact with students was unavailable due to protected student information (i.e., regarding academic standing and/or race/ethnicity). However, the sample size was limited by using indirect recruitment methods only. Additionally, successful recruitment required that campus partners be willing and available to assist with recruitment. Although a representative sample of UW-Madison undergraduates was obtained in terms of race/ethnicity, age, and classification, it is unknown whether a representative sample was obtained for (a) students on academic probation, and (b) R/EM students—when grouped by academic standing. As such, the findings may be unique to the students who participated rather than representative of the greater population. To address this limitation, additional research examining the variables and populations studied herein could be conducted so as to confirm or disconfirm study findings.

Generalizability of findings. This study was conducted at a single university. As the cultural nuances of an institution may impact the findings observed herein, the generalizability of findings to other educational institutions of higher education are recommended with caution. To address this limitation in the future, it is recommended that PSC-based investigations include multi-site participant recruitment such that psychosociocultural non-cognitive variables could be

examined within and more accurately generalized across peer institutions (e.g., UW-Madison, University of Michigan, and University of Minnesota). Examinations with peer-institutions would allow researchers to minimize issues of validity related to institution type. For example, a two-year technical college with large numbers of recent high school graduates as well as returning adult students would have a vastly different student population than a four-year liberal arts college with a substantial number of students graduating *on-time*, per se. The academic persistence wellness for these populations may thus be related to different sets of or relationships between psychosociocultural factors that promote persistence.

Measurement. This section describes two limitations pertaining to the measurement procedures used in this study. First, this study sought to examine the experiences of R/EM students on academic probation. At the end of the first semester of participant recruitment, the researcher had not obtained an adequate sample of R/EM participants needed for single-sample analyses. Participant recruitment methodology proved difficult and contributed most to this outcome. For example, participant recruitment efforts were most successful when the researcher had a long-standing and positive working alliance with the campus partners for recruitment. Alternatively, it was exceedingly difficult to obtain the trust and support of campus partners when the relationship was being developed for the purposes of the research only. To address these potential challenges, it is suggested that researchers build into their research protocol sufficient time to better understand the needs and cultural climates of all campus partners for recruitment. Doing so may assist in researchers' in their abilities to (a) establish positive working relationships with recruitment partners, (b) provide a partner-centered and student-centered rationale for the study (rather than a researcher-centered rationale), and (c) to demonstrate the researchers' professional and cultural competence and trustworthiness in conducting PSC based

research examining potentially sensitive and politicized topics (see Knight, Roosa, and Umaña-Taylor, 2009).

When participant recruitment was extended beyond R/EM students on probation to include non-R/EM students on probation as well as students with satisfactory academic standing (regardless of race/ethnicity), the measures assessing stress appraisals and coping strategies were administered only to the AP-Yes group. Although this retained a primary component of the original focus for the study (i.e., persistence wellness experiences of students on academic probation), it also resulted in a lack of information about the appraisals and coping strategies used by students in good standing for managing their collegiate stress.

To address this limitation in the future, it is recommended that the appraisal and coping strategies measures be appropriately adapted for non-probation participants. For example, the situational stressor could be changed from "being on academic probation" to "maintaining satisfactory academic progress." In the current study, students in good academic standing reported having overall college stress as well as tension regarding academic probation (as measured via the Student Characteristics instrument). If stress appraisals and coping strategies had been assessed for these students, information may have been obtained about the AP-No group that could have been used in comparisons with the AP-Yes group (e.g., the degree to which challenge-based appraisals were associated with persistence commitments and with the other variables – mentoring support, comfort in the college environment, and everyday mindfulness).

Second, this study examined college persistence via the proxy variable of students' persistence commitments. Although this methodology has been used throughout PSC-based and other student development-centered research, it is recommended that investigators also examine

actual persistence-to-graduation. Longitudinal studies could follow students from entry to departure (i.e., degree completion or pre-completion departure) and provide valuable information about students' experiences and the barriers to/ protective factors of persistence wellness throughout students' college years. For example, Byars and McCubbin (2001) recommended that vocational psychology research be expanded to include a longitudinal focus on "achievement motivation, goal oriented behavior, and persistence". These are areas that also potentially interact for students on academic probation and may be able to inform multicultural stress coping processes.

Third, mindfulness, as it was measured herein, focused on students' attention and awareness to various aspects of their college experiences and environment in the everyday. As the MAAS (Brown & Ryan, 2003) has been used more extensively in mindfulness-based interventions research, it is possible that using the MAAS for the current study may not have captured the ways in which students on probation and racial/ethnic minority students attend to and use their awareness to respond to the stressors of probation or the stressors of being a minority at a predominantly white university. Future research including the construct of mindfulness via a PSC approach to persistence wellness could use a student-centered measure of mindfulness. For example, responses from an open-ended question focusing on students' definitions of mindfulness in the context of college persistence, race/ethnicity, and/or academic standing could be used to develop an instrument that better captures the unique phenomena of mindful awareness and attention for R/EM students and students on probation.

Directions for Future Research

Findings from this study indicated the continued importance of examining the college-going experiences of students' on academic probation via a psychosociocultural model that

provides a multicultural positive psychology orientation to complex student-by-institution interactions implicated in the persistence wellness of undergraduates. As such, directions for future research are provided next.

Another recommendation for future research is the continued investigation of the college going experiences of R/EM students on academic probation. One way to extend PSC-based research with this population might be through the inclusion of additional cognitive and non-cognitive indicators of persistence wellness. Given the finding herein that students on academic probation reported only slightly less favorable persistence commitments than students not on probation, the construct of *resilience* may be an important area of future research via the PSC model. Benard (2004) described five qualities implicated in the enhancement of resilience in the face of challenges: as social competence, problem-solving, critical consciousness, autonomy, sense of purpose and future. The findings of the current study reflect some of the qualities highlighted by Benard. For example, situational coping combined with positive perceptions of mentoring appear reflective of students' *social competence* and *problem solving* skills. Likewise, challenge-based appraisals and meaning-based coping strategies may reflect the resilience-related quality of *sense of purpose*. To further elucidate the role of resilience in students' persistence wellness experiences, future PSC-based research could examine the relationships between the five resilience-based qualities, other PSC variables, and students' persistence commitments. Research of this type could provide additional information about the skills that promote students' success. Too, psychologists and academic success personnel would have even more information about how to help institutions develop resilience-supporting initiatives or services that promote resilience for the purposes of academic persistence wellness.

PSC-based research has provided a much-needed contextualizing of students' college persistence via investigations that have focused on the non-cognitive variables that promote student success outcomes. Cognitive variables have also been predictive of college student retention, and thus researchers have recommended continued integration between the perspectives of psychology and education pertaining to the theory and research of college student academic outcomes (see Robbins et al., 2004). For example, in the same study that examined psychosocial predictors of student success, Robbins et al. (2004) found that "academic goals, academic self-efficacy, and academic-related skills were shown to be the strongest predictors of college retention" (p. 274). The current study examined the academic-related cognitive indicator of academic standing or degree progress. As expected, students on academic probation had significantly lower GPAs and had completed significantly fewer credits toward their degrees than students with satisfactory academic standing. As such, it would be helpful to have additional information about the intersections among the academic and non-academic experiences of students on academic probation. One way to examine these academic experiences may be via the Learning and Study Skills Inventory (LASSI; Weinstein, Schulte, & Palmer, n.d.). The LASSI is a self-report instrument composed of three subsets of strategic learning (skills, will, self-regulation), and that may have potential as a research and intervention tool when used with students on academic probation. Of particular importance for PSC-based research is the *Will* dimension of the instrument, as it assesses psychological factors such as students' academic worries, openness to learning, and effort/motivation (see http://www.hhpublishing.com/_assessments/LASSI/popup_users.html). Investigations examining the utility and validity of using the LASSI with students on probation generally, and with R/EM

students on academic probation more specifically, could provide academic affairs professionals with a resource useful to students as well as administrators.

Finally, there were small but positive associations between everyday mindfulness and (a) the other PSC-based variables, and (b) persistence commitments. Thus, additional conceptualization and exploration of the construct of everyday mindfulness within a PSC framework of persistence wellness is recommended. Given the scholarship pertaining to mindfulness and stress processes, future PSC-based studies could extend this focus to students on academic probation. For example, Kabat-Zinn (2005) suggested that stress resistance could be developed through building well-being at the psychological and physical levels, and "during times when [persons] are not particularly taxed or overwhelmed" (p. 240). Mindfulness-based practices have been demonstrated to have a significant impact on stress resistance. Thus, future research would be helpful that examines the intentional cultivation of mindfulness by students on probation, and the associated outcomes in persistence commitments and ultimately degree completion. Assisting students in their development of increased internal and external awareness would be congruent with a multicultural optimal psychology approach to student support. Future research is recommended that examines (a) the relationship between mindfulness-based skills-training and students' internal and external awareness development, (b) the impact of increased awareness on students' stress appraisals and use of resource- and culturally-congruent coping strategies, and (c) the combined impact of these variables on the persistence commitments of R/EM students on academic probation--especially given that in the current study, R/EM students on academic probation may benefit from programming and services designed to increase their comfort in the college environment. Research of this type may provide additional information about a different type of mindful awareness and attention used by R/EM students and students on

academic probation in their efforts to persist in a college environment that may at times be unwelcoming and marginalizing.

Conclusion

In sum, the findings in the current study indicated that students' persistence wellness may be enhanced through (a) the development of students' challenge-based stress appraisals of academic probation, (b) helping students to respond to stressors appraised as threatening (e.g., via tension-based coping), (c) increasing students' access to mentors who are supportive of students' college goals and of students' challenges in responding to the cultural demands of the campus environment, (d) addressing campus environment factors that reduce students positive perceptions of and comfort in the college setting, and (e) enhancing students' everyday mindfulness through the development of increased present-moment and self-awareness.

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Appendices

Appendix A

Students' Background Characteristics Questionnaire

1 **Age:**
Fill-in-the-blank

2 **Sex or gender:**
- Female
- Male
- Transgender
- Not listed (please specify)

3 **How many credits have you earned toward your undergraduate degree?**
Fill-in-the-blank

4 **Major/s or intended field of study**
Fill-in-the-blank or undecided

5 **What is your current cumulative GPA**
Fill-in-the-blank

6 **Are you currently on academic probation?**
- Yes
- Not sure
- No.

7 **Is this the first time that you have been on academic probation?**
- Yes. If yes, for how many semesters have you been on academic probation?
- No. If no, (a) when was the last time you were on academic probation, and (b) for how many semesters were you on academic probation?

8 **How many credits are you taking in fall 2012?**
Fill-in-the-blank

9 **How many credits did you take last semester (spring 2012)?**
Fill-in-the-blank

10 **In what year and semester did you start school at UW-Madison? For example,** Fall 2010**.**
Fill-in-the-blank

11 **What is your race and/or ethnicity?**
- American Indian (Please specify)
- African American / Black (Please specify)
- Asian American (Please specify)
- Hispanic / Latina/o (Please specify)
- Bi-racial / Multi-racial (Please specify)
- White/Caucasian (Please specify)
- Not listed (Please specify)

12 **Participation in academic support program(s). (Check any that apply):**
- CeO (Center for Educational Opportunity; formerly TRIO)
- AAP (Academic Advancement Program)
- PEOPLE Scholars
- Chancellor's Scholars
- First Wave
- POSSE
- McNair
- Pathways to Excellence
- Powers-Knapp
- None of the above or N/A
- Not listed (please specify)

13 **How often do you worry about having enough money to meet your needs?**
very often / somewhat often / sometimes / rarely / very rarely / not applicable

14 **How difficult is it for you or your family to be able to handle college costs? very difficult / somewhat difficult / neutral / somewhat easy / very easy / not applicable**
very difficult / somewhat difficult / neutral / somewhat easy / very easy / not applicable

15 **When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do?**
very often / somewhat often / sometimes / rarely / very rarely / not applicable

16 **How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies?**

very large strain / somewhat of a strain / neutral / a little strain / hardly any strain at all / not applicable

17 **How do you pay for your college expenses (tuition, housing, food, travel, etc.)? (Check any that apply):**

- Self
- Parents
- Spouse/ Partner/ Significant Other
- Job/Work
- Student loans
- Scholarships, fellowships, grants (specify)
- Savings
- Credit Card
- Not listed (please specify)

18 **Did you begin college at UW-Madison or did you transfer from another university? Select one:**

- UW-Madison
- Transferred

19 **What is your primary caregiver/s' highest level of education? (drop-down)**

Mother

Father

Primary Caregiver 1 (if applicable)

Primary Caregiver 2 (if applicable)

- No formal schooling
- Some grade school
- 8th grade
- Some high school
- Technical certificate
- GED
- High school diploma
- Some college
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- JD, MD, PhD or other advanced degree
- Don’t know
- N/A (Doesn’t apply)

20 **During the academic school year, about how many hours a week do you usually spend outside of class on activities related to your academic program. Academic activities may include: studying, writing, reading, lab work, rehearsing, etc.?**
Fill-in-the-blank

21 **During the academic school year, about how many hours a week do you usually spend outside of class on co-curricular activities, such as: a student organization, community-service, intramural sports, fraternity/sorority, professional/academic student organization, etc.? (fill-in-the-blank)**
Fill-in-the-blank

22 **Involvement in campus activities (Check all that apply)**

- Academic and professional organizations
- Community service/service-learning/volunteers
- Cultural/Ethnic/Diversity-related organizations
- Fraternity/sorority/Greek
- Intercollegiate sports
- Political and social action club
- Sports/intramurals
- Student government
- Not listed (please specify) _____ _
- N/A

23 **How much do your extracurricular activities affect your school work?**

- My extracurricular activities do not interfere with my school work
- My extracurricular activities take some time from my school work
- My extracurricular activities take a lot of time from my school work
- N/A

24 **During the academic school year, how many hours each week do you usually spend working at a paying job (on-campus or off-campus)?**
Fill-in-the-blank

25 **How much do your job/s affect your school work?**

- My job/s do not interfere with my school work
- My job/s take some time from my school work
- My job/s take a lot of time from my school work
- N/A

26 **Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution?**

very much stress / much stress / some stress / a little stress / very little stress / not applicable

27 **How much pressure do you feel when trying to meet deadlines for course assignments?**

extreme pressure / much pressure / some pressure / a little pressure / hardly any pressure at all / not applicable

28 **How often do you feel overwhelmed by the academic workload here?**

very often / somewhat often / sometimes / rarely / very rarely / not applicable

29 **How much do other aspects of your life suffer because you are a college student?**

very much / much / some / little / very little / not applicable

30 **Does the situation of academic probation create tension in you?**

Not at all/ slightly/ moderately/ considerably/ extremely

31 **To what extent do I perceive the situation of academic probation as stressful?**

Not at all/ slightly/ moderately/ considerably/ extremely

32 **The next ratings refer to your level of stress at this university. Thinking of your own experience, please rate your level of stress regarding each category listed.**

Categories:

- Academic
- Financial
- Social
- Family
- Overall college experience

Rating scale (1-5):

- Not at all stressed
- Moderately Stressed
- Stressed
- Very Stressed
- Extremely Stressed

33 **How much experience have you had with meditation in the past six months?**

None/ None in past 6 months/ Less than once per month/ One to three times per month/ At least once per week

34 **As it relates to your academic success, how would you define or describe mindfulnesss?**

Fill-in-the-blank

35 **What campus resources have you used or do you intend to use to enhance your personal wellness?**

Fill-in-the-blank

36 **What campus resources have you used or do you intend to use to enhance your academic achievement?**

Fill-in-the-blank

Appendix B

Stress Appraisal Measure – Revised (SAM-R)

Instructions: Please answer the following questions with respect to how you think and feel about the following situation: **academic probation**. Please respond according to how you view this situation right now. Please answer all the questions. Answer each question by using the following scale:

0	1	2	3	4
Not at all				A great amount

1.	I am eager to tackle this problem.	0	1	2	3	4
2.	I feel I can become stronger because of this problem.	0	1	2	3	4
3.	I am excited about the potential outcome(s) related to this situation.	0	1	2	3	4
4.	I feel anxious about this situation.	0	1	2	3	4
5.	The outcomes of this situation will be negative.	0	1	2	3	4
6.	I perceive this situation as threatening.	0	1	2	3	4
7.	This situation is going to have a negative impact on me.	0	1	2	3	4
8.	I have the ability to do well in this situation.	0	1	2	3	4
9.	I have what it takes to do well in this situation.	0	1	2	3	4
10.	I have the skills necessary to overcome this problem.	0	1	2	3	4
11.	This situation is beyond my control.	0	1	2	3	4
12.	I can positively attack this situation.	0	1	2	3	4
13.	There is someone I can turn to for help regarding this situation.	0	1	2	3	4
14.	There is help available to me for dealing with this situation.	0	1	2	3	4
15.	I feel totally helpless about this situation.	0	1	2	3	4
16.	No one has the power to overcome this situation.	0	1	2	3	4
17.	This situation impacts me greatly.	0	1	2	3	4
18.	This situation has serious implications for my life.	0	1	2	3	4
19.	This situation has long-term consequences for me.	0	1	2	3	4

Appendix C

Coping Schemas Inventory –Revised, Modified (CSI-R-M)

Rating Scale:

1	2	3	4	5
Not at all/ Never	A little bit/ rarely	A moderate amount/ occasionally	A considerable amount/ often	A great deal/ always

Instructions:
To what extent do you usually use each of the following strategies to cope with the following situation: **Academic Probation**? For each coping strategy listed, please rate the item by using the scale provided.

Situational (8 items):

2 Do something about the situation

5 Confront the problem by taking appropriate actions

11 Break down the problem into smaller steps and work on one at a time

23 Take the problem into my own hands by fighting back

29 Actively seek out information on my own

37 Make a plan of action and follow it

50 Be determined and persistent in attacking the problem

61 Double my effort to change the situation

Self-Restructuring (8 items):

9 Do what is necessary to fulfill the requirements of the situation

20 Change my negative attitude toward this problem into a positive one

21 Change my pace to suit the situation

48 Change my attitude in view of this problem

53 Restructure my actions in light of the problem

57 Try to look at the problem from a new perspective

58 Rearrange my activities to accommodate the situation

63 Develop better time management skills so that I will be more efficient in the future

Meaning (4 items):

36 Believe that there must be a purpose in the suffering I experience

59 Believe that there is meaning and purpose to the things that happen to me

66 Believe that valuable lessons can be learned from undesirable experiences

69 Derive meaning from my past

Acceptance (9 items):

10 Accept what has happened because eventually things will work out as well as can be expected

12 Learn to live with the problem, because nothing much can be done about it

14 Accept/tolerate life as it is and make the best of it

15 Learn to accept the negative realities of life

24 Look at unavoidable life events as part of my lot in life

33 Accept the present situation because no matter how bad things are they could always be worse

40 Avoid thinking about the problem or things that arc upsetting

56 Look at the humorous side of this problem

62 Don't worry about the past or the future, accept each day as it comes

Tension Reduction (8 items):

19 Practice controlled breathing techniques

25 Engage in mental exercise (such as imagery) to reduce tension

27 Try to reduce my anxious thoughts

43 Mentally transform the situation in to something less threatening

46 Try not to focus on likely negative outcomes

47 Practice muscle relaxation techniques

70 Remind myself that worrying will not accomplish anything

71 Practice meditation techniques to reduce tension

Appendix D

Mentoring Scale – 5 Item

Instructions: Please answer the following questions regarding your mentors or role models at the university. Circle the most accurate response.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

1.	There are university professors/instructors/counselors who encourage your educational efforts.	1	2	3	4
2.	There are university professors/instructors/ counselors who have taken you "under their wing."	1	2	3	4
3.	There is someone on campus who you consider as your mentor.	1	2	3	4
4.	There is someone on campus who cares about your educational success.	1	2	3	4
5.	There is someone with whom you identify as a role model on campus.	1	2	3	4

Appendix E

University Environment Scale

Instructions: Please respond to these next statements using the following scale:

1	2	3	4	5	6	7
Not at all						Very True

1.	Class sizes are so large that I feel like a number.	1	2	3	4	5	6	7
2.	The library staff is willing to help me find materials/books.	1	2	3	4	5	6	7
3.	University staff have been warm and friendly.	1	2	3	4	5	6	7
4.	I do not feel valued as a student on campus.	1	2	3	4	5	6	7
5.	Faculty have not been available to discuss my academic concerns.	1	2	3	4	5	6	7
6.	Financial aid staff has been willing to help me with financial concerns.	1	2	3	4	5	6	7
7.	The university encourages/sponsors ethnic groups on campus.	1	2	3	4	5	6	7
8.	There are tutoring services available for me on campus.	1	2	3	4	5	6	7
9.	The university seems to value minority students.	1	2	3	4	5	6	7
10.	Faculty have been available for help outside of class.	1	2	3	4	5	6	7
11.	The university seems like a cold, uncaring place to me.	1	2	3	4	5	6	7
12.	Faculty have been available to help me make course choices.	1	2	3	4	5	6	7
13.	I feel as if no one cares about me personally on this campus.	1	2	3	4	5	6	7
14.	I feel comfortable in the university environment.	1	2	3	4	5	6	7

Appendix F

Mindful Attention Awareness Scale

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never

1	I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6	
2	It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6	
3	I rush through activities without being really attentive to them.	1	2	3	4	5	6	
4	I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6	
5	I find myself doing things without paying attention.	1	2	3	4	5	6	
6	I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5	6	
7	I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6	
8	I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6	
9	I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6	
10	I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6	
11	I drive places on 'automatic pilot' and then wonder why I went there.	1	2	3	4	5	6	
12	I find myself preoccupied with the future or the past.	1	2	3	4	5	6	
13	I snack without being aware that I'm eating.	1	2	3	4	5	6	
14	I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6	
15	I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.	1	2	3	4	5	6	

Appendix G

College Persistence Questionnaire

Instructions: Please respond to these next statements, check the most accurate response:

1. When you think of the people who mean the most to you (friends and family), how disappointed do you think they would be if you quit school?
    - Very disappointed
    - Disappointed
    - Neutral
    - A little disappointed
    - Not at all disappointed
    - Does not apply

2. There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree?
    - very certain
    - somewhat certain
    - neutral
    - somewhat uncertain
    - very uncertain

3. At this moment in time, how strong would you say your commitment is to earning a college degree, at UW-Madison or elsewhere?
    - Not strong at all
    - Somewhat strong
    - Neutral
    - Strong
    - Very strong

4. After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere?
    - very strong
    - somewhat strong
    - neutral
    - somewhat weak
    - very weak

5. How supportive is your family of your pursuit of a college degree, in terms of their encouragement and expectations?
    - Very unsupportive
    - Unsupportive
    - Neutral
    - Supportive
    - Very supportive
    - Does not apply

6. When you consider the benefits of having a college degree and the costs of earning it, how much would you say that the benefits outweigh the costs, if at all?
    - benefits far outweigh the costs
    - benefits somewhat outweigh the costs
    - benefits and costs are equal
    - costs somewhat outweigh the benefits
    - costs far outweigh the benefits

7. How likely is it that you will earn a degree from UW-Madison?
    - Not at all likely
    - Somewhat likely
    - Neutral
    - Likely
    - Very likely
    - Does not apply

8. How confident are you that UW-Madison is the right university for you?
    - Not confident at all
    - Somewhat confident
    - Neutral
    - Confident
    - Very confident

9. How likely is it that you will reenroll at UW-Madison next semester?
    - Not at all likely
    - Somewhat likely
    - Neutral
    - Likely
    - Very likely
    - Does not apply

10. How much thought have you given to stopping your UW-Madison education and perhaps transferring to another college, going to work, or leaving for other reasons?
    - Very little
    - A little
    - Neutral
    - Much
    - Very much

Note: The *Degree Commitment* subscale includes items 1 through 6. The *Institutional Commitment* subscale includes items 7 through 10.

Appendix H

Descriptives: Students' Background Characteristics

Variable	AP-Yes Valid *n*	%					AP-No Valid *n*	%			
Transfer	97						149				
No	75	77.3					120	80.5			
Yes	22	22.7					29	19.5			
Start-UW (top 4)	90						138				
Fall08	0						15	10.9			
Fall09	11	12.2					32	23.2			
Fall10	12	13.3					45	32.6			
Fall11	52	57.8					27	19.6			
			M	*SD*	Range				*M*	*SD*	Range
Age	97		20.51	2.869	18-42		136	91.3	21.70	4.382	18-57
18-23	89	91.8					9	6			
24-29	7	7					1	.7			
40-49	1	1					2	1.3			
50-59	0	0					1	.7			
Gender	97						149				
Female	55	56.7					112	75.2			
Male	41	42.3					37	24.8			
Trans-gender	1	1					0	0			

	AP-Yes						AP-No				
Variable	Valid *n*	%					Valid *n*	%			
Race/ Ethnicity	97						149				
American Indian	0	0					1	.7			
African American/ Black	6	6.2					4	2.7			
Asian American	12	12.4					24	16.1			
Hispanic/ Latina(o)	9	9.3					11	7.4			
Biracial/ Multiracial	10	10.3					10	6.7			
Caucasian/ White	59	60.8					95	63.8			
Not Listed	2	2.1					4	2.7			
			M	*SD*	Range				*M*	*SD*	Range
Caregiver Education - 1	97		9.04	2.411	1-14		148		8.64	2.736	1-14
6-High School or 7-GED	11	11.4					24	16.2			
8-Some College	9	9.3					13	8.8			
9-Associate's	9	9.3					12	8.1			
10-Bachelor's	33	34					41	27.7			
11-Master's	23	23.7					25	16.8			
12-Advanced	2	2.1					10	6.8			
All else*	10	10.2					23	15.6			
*No formal schooling, some grade school, 8th grade, some high school, technical certificate, or does not apply											
			M	*SD*	Range				*M*	*SD*	Range
Caregiver Education - 2	97		8.57	2.688	1-14		148		8.22	3.140	1-14
6-High School or 7-GED	18	18.6					24	16.3			
8-Some College	14	14.4					13	8.8			
9-Associate's	6	6.2					12	8.1			
10-Bachelor's	29	29.9					34	23			
11-Master's	14	14.4					20	13.4			
12-Advanced	1	1.0					11	7.4			
All else*	15	15.5					34	23			

Variable	AP-Yes						AP-No				
	Valid *n*	%					Valid *n*	%			
			M	*SD*	Range				*M*	*SD*	Range
Total credits earned	86		43.34	29.975	1-121		130		75.95	36.555	2-122
1-15	18	20.9					10	7.7			
16-30	14	16.3					13	10.0			
31-45	19	22.1					9	6.9			
46-60	13	15.1					10	7.7			
> 60	22	25.6									
61-75	-						17	13.1			
76-90	-						15	11.5			
91-105	-						24	18.5			
106-122	-						16	12.3			
>120	-						16	12.3			
Classification	86						130				
Freshman	23	26.7					14	10.8			
Sophomore	35	40.7					25	19.2			
Junior	18	20.9					28	21.5			
Senior	10	11.6					63	48.5			
Top 5 Majors: AP-Yes											
Undecided	13	13.5									
Kinesiology	10	10.4									
Biology	9	9.4									
Mechanical Egr.	6	6.3									
Genetics	5	5.2									
Top 5 Majors: AP-No											
Rehab. Psychology							23	17			
Psychology							18	13.3			
Social Welfare							10	7.4			
Human Dev't and Family Studies							9	6.7			
Personal Finance							8	5.9			

Variable	AP-Yes Valid *n*	%					AP-No Valid *n*	%			
Double Major											
Yes	31	32					35	23.5			
			M	*SD*	Range				*M*	*SD*	Range
GPA	96		2.179	.449	.75-3.03		144		3.160	.567	0-4
Below 2.0	16	16.7					2	1.4			
2.0	18	18.8					2	1.4			
2.25	16	16.7					2	1.4			
2.5	28	29.2					6	4.2			
2.75	11	11.5					7	4.9			
3.0 or higher	7	7.3					125	86.7			
Semesters on AP	97						Not assessed				
One	73	75.1									
Two	21	21.6									
>2	3	3.1									
First time on AP	97						Not assessed				
Yes	77	79.4									
No	20	20.6									
			M	*SD*	Range				*M*	*SD*	Range
Hours-Academic (Studying)	96		16.09	5.485	4-22		134		14.51	5.837	2-22
<4 hrs	0	0					2	.14			
4-10 hrs	16	16.6					30	22.38			
11-19 hrs	40	41.7					60	44.78			
>20	13	13.5					20	14.9			
N/A	27	28.1					22	16.4			

Variable	AP-Yes Valid *n*	%					AP-No Valid *n*	%			
Academic Support Programs	97						149				
Yes (at least 1)	49	49.4									
Academic Support Involvements											
Center for Educational Opportunity (CeO; formerly TRIO)	11						26				
Academic Advancement Program (AAP)	10						5				
PEOPLE Scholar	9						3				
Chancellor's Scholar	0						0				
First Wave	0						0				
POSSE	1						2				
McNair Scholar	0						2				
Pathways to Excellence	1						1				
Powers-Knapp Scholar	3						1				
Not listed (Please specify)	14						2				
N/A	38						73				

Variable	AP-Yes Valid *n*	%					AP-No Valid *n*	%			
Extracurricular Involvements	97						149				
Academic and professional organizations	28	28.9					64	43			
Community service/ service learning/ volunteer	31	32.0					76	51			
Cultural/ Ethnic/ Diversity-related organizations	15	15.5					26	17.4			
Fraternity/ Sorority/ Greek	12	12.4					11	7.4			
Intercollegiate sports	4	4.1					10	6.7			
Political and/or social action club	5	5.2					9	6.0			
Sports (intramural)	23	23.7					23	15.4			
Student government	1	1.0					5	3.4			
Not listed (please specify)	10	10.3					12	8.1			
N/A (does not apply)	24	24.7					13	8.7			
			M	*SD*	Range				*M*	*SD*	Range
Extracurricular- Hours	92		7.64	5.841	1-23		132		7.90	6.396	1-22
1 hr	12	13					15	11.4			
2-5 hrs	33	35.9					49	37.1			
6-10 hrs	17	18.5					28	21.2			
11-19 hrs	22	24					25	19			
>20 hrs	2	2.1					3	2.3			
N/A	6	6.5					12	9.1			

Variable	AP-Yes Valid *n*	%	*M*	*SD*	Range		AP-No Valid *n*	%	*M*	*SD*	Range
Extracurricular - Impact on schoolwork	96		1.50	.846	0-3		133		1.62	.776	0-3
0 Does not apply	13	13.5					14	10.5			
1 Does not interfere	31	32.3					33	24.8			
2 Takes some time	43	44.8					76	57.1			
3 Takes a lot of time	9	9.4					10	7.5			
Money for School: Top 6	97						149				
Self	58	59.8					84	56.4			
Parents	61	62.9					82	55.0			
Loans	49	50.5					63	42.3			
Savings	25	25.8					43	28.9			
Scholarships	35	36.1					65	43.6			
Job/Work	52	53.6					76	51			
			M	*SD*	Range				*M*	*SD*	Range
Job/Work- Hours	76		11.17	7.475	1-22		120		13.08	7.394	1-22
1 hr	20	26.3					19	15.8			
6-11 hrs	21	27.6					16	13.2			
12-19 hrs	19	24.9					45	37.5			
>20 hrs	9	11.8					13	10.8			
N/A	7	9.2					20	16.7			
			M	*SD*	Range				*M*	*SD*	Range
Job – Impact on schoolwork	95		1.17	1.098	0-3		131		1.58	1.022	0-3
0 Does not apply	39	41.1					29	22.1			
1 Does not interfere	12	12.6					20	15.3			
2 Takes some time	33	34.7					59	45.0			
3 Takes a lot of time	11	11.6					23	17.6			

Appendix I

Wellness e-Brochure

live mindfully

Wellness Resources for UW-Madison College Students

What is Wellness?

Wellness is how you maintain your health and well-being. Wellness includes your thoughts, feelings, attitudes, behaviors, and values. It is about finding balance.

Why is wellness important for college students?

Most students experience stress during college. Active attention to your wellness gives you the strength to cope with college stressors and to persist in reaching your academic, social, and career goals.

This brochure was developed in conjunction with a dissertation titled, "A Psychosociocultural Approach to Academic Persistence Wellness for College Students on Academic Probation", by Leya Moore, Ph.D. (2013).

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Wellness Tips and Strategies

Seek support from advisors, friends, and family.

Be present in the moment.

Learn about healthy nutrition.

Be supportive for another student.

Spend time in nature.

Make time for sleep.

Listen to music.

Do something that you care about.

Wellness Resources

» Become involved
  - Campus diversity and community
  - Diversity Dialogues

» Improve your personal wellness with yoga or meditation

» Use advising, learning, and career resources

» Get moving, indoors and outdoors

» Meet with a health professional
  - Drop-in to talk
  - Meet with a nutritionist
  - Try individual counseling
    - UHS
    - Counseling Psychology Training Clinic
  - Consider a group

» Volunteer

» Be inspired
  - by the arts
  - in nature

» Find your own spaces and places
  - Olbrich Botanical Gardens and Thai Pavilion