Factors Associated With College Coping Among High-Achieving Scholarship Recipients From Adverse Backgrounds

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Background/Context: Studies have shown that students from low-income backgrounds are particularly at risk of not succeeding in college and that, once in college, students from the lowest socioeconomic groups complete college at a fraction the rate of student from the highest socioeconomic groups. College presents unique challenges for students from adverse backgrounds. To adequately support such students in college, we must first understand the kinds of programs and support services that enable students from adverse backgrounds to cope with stressors encountered during college.

Purpose /Objective: The purpose of the study was to improve understanding of the factors that enable students from adverse backgrounds to cope with the college environment in pursuit of a bachelor's degree. The analyses addressed the following research questions: (1) Among students from adverse backgrounds, do the services and supports encountered during college enhance their ability to positively cope with the college environment? (2) Are the associations between college services and supports, and positively coping with the college environment conditional on gender, identifying as a student of color, year in college, or level of adversity experienced prior to college?

Research Design: The study utilized multivariate regression techniques to analyze survey data. The first analytic stage involved regressing each of the three Coping with the College Environment Scales on distinct blocks of variables. The second analytic stage tested for conditional effects by gender, identifying as a student of color, the number of adversities experienced prior to college, and HAA Scholarship application year as a proxy for year of initial college entry.

Conclusions/Recommendations: The study's main findings include: having a mentor while in college as well as during high school had a positive influence on college coping; self-efficacy significantly and positively influenced all three dimensions of coping with the college environment; and several relationships differed between females (vs. males) and first-year (vs. other) students.

Overall, the study responds to calls for additional research in this arena, builds on the literature on college coping, readiness and success, and extends previous validation research on dimensions of coping with college through analysis of a robust sample of college students. The study reaffirms the importance of college scholarship programs in providing researchers a lens through which to study and learn from unique populations of students.

Given the growing diversity in the U.S. postsecondary system and the accompanying increase in students from all backgrounds, including low-income or otherwise challenging upbringings, educators and policymakers concur that failing to effectively support college students from adverse and severely underresourced backgrounds endangers our nation's social and economic vitality (e.g., Engberg & Allen, 2011; Kaufman & Bradbury, 1992; Wyner, Bridgeland, & DiIulio, 2007). In order to adequately support such students in college, we must first understand the kinds of programs and support services that enable students from adverse backgrounds to cope with stressors encountered during college (Ackermann & Morrow, 2007; Savitz-Romer, Jager-Hyman, & Coles, 2009). Based on her study of trends in student health data spanning three decades, Sax (1997) highlighted the need for additional research examining students' behaviors in relation to campus services, and Struthers, Perry, and Menec (2000) have called for greater understanding of how college personnel can more effectively help students positively adapt when confronted with academic stress.

Research on educational success clearly identifies the kinds of adverse backgrounds that most disadvantage students in terms of accessing and succeeding in college. These backgrounds include students from low socioeconomic households, students who lack consistent parental involvement, students who frequently change primary and secondary schools, and students from underrepresented racial/ethnic groups (e.g., Baker & Siryk, 1984; Banyard & Cantor, 2004; Grodsky & Jackson, 2009; Horn, 1997; Horn, Chen, & Adelman, 1998; Kaufman & Bradbury, 1992; Wolniak, Rude, Gebhardt, & Hoffer, 2011). Students that meet one or more of these categories tend to be disadvantaged in their access to the kinds of economic, social, and cultural resources associated with successful progression into and completion of college (Perna, 2006; Wolniak et al., 2011).

Students from low-income backgrounds are particularly at risk of not succeeding in college. Reports have shown that as many as 60% of low-income students fail to enroll in a college or university immediately following high school graduation, compared to roughly 16% of students from families earning more than $100,000 (Bozick & Lauff, 2007). Among first-generation students, roughly 47% do not enroll in a postsecondary institution, versus 13% of students from families with two advanced

degrees (Bozick & Lauff, 2007). Once in college, students from the lowest socioeconomic quartile graduate college within five years at half the rate of student from the highest quartile, even after controlling for factors such as grades, major field of study, and institution attended (Ross et al., 2012). College presents unique challenges for students from adverse backgrounds and a student's ability to cope with challenges influences his or her likelihood of timely college completion (Banyard & Cantor, 2004; Pritchard & Wilson, 2003).

The disadvantages students face while growing up in the lowest socioeconomic strata are compounded when hardships are encountered in the home, such as when a parent experiences unemployment, when a family member battles addiction, or when confronted with an abusive relationship or other forms of trauma (Banyard & Cantor, 2004; Min & Sherraden, 2011). Among students who face the most severe hardships during high school, performing well academically and aspiring to attend college may not be enough to overcome the barriers presented by their family or social circumstances. Even among resilient students who manage to maintain good academic standing despite adverse conditions, achieving the social and economic rewards that accompany a college education may be relatively less determined by their academic ability, performance, or aspirations, and more determined by barriers associated with their lack of wealth, social position, or difficult home lives.

The purpose of the present study is to improve our understanding of the factors that enable students from adverse backgrounds to cope with the college environment in pursuit of a bachelor's degree. We examined survey data collected from a unique sample of college students from adverse backgrounds who participated in a college scholarship program in order to address the following research questions:

> **Question 1.** Among students from adverse backgrounds, do the services and supports encountered during college enhance their ability to positively cope with the college environment?

> **Question 2.** Are the associations between college services and supports, and positively coping with the college environment conditional on gender, identifying as a student of color, year in college, or level of adversity experienced prior to college?

By addressing the first question, we highlight support mechanisms that foster coping with the college environment, such that campuses and sponsored programs may use the results to improve delivery of services or shape future interventions aimed at supporting students from adverse backgrounds. By addressing the second question, we identify differences

in coping with college based on gender, race/ethnic, adversity experienced prior to college, and whether coping mechanisms change during the college years. Altogether, the study advances previous efforts to measure and understand coping tendencies among college students; most notably, Ackermann and Morrow's (2007) validation study based on a single institution sample of college students. By employing a multivariate framework to analyze a sample of college students from across the United States who had experienced adversity prior to college, we contribute new evidence on the measurement and prediction of coping with the college environment.

COPING WITH COLLEGE

College students come into contact with a variety of stressors when faced with the social, academic, and other demands accompanying their college experience (Bewicka, Koutsopoulou, Miles, Slaad, & Barkhame, 2010; Palmer & Rodger, 2009). A student's ability to effectively cope with his or her college environment has been found to be an important antecedent to a variety of outcomes, such as engagement in the academic and social environment on campus (e.g., Torres & Solberg, 2001), sense of belonging (Hoffman, Richmond, Morrow, & Salomone, 2002), and commitment to maintaining college enrollment and academic motivation (Berger, 1997; Struthers et al., 2000), as well as an indirect influence on postsecondary retention and completion (Tinto, 1993).

Among students from adverse backgrounds, succeeding in college can be an unattainable goal without the help of outside interventions, and success may ultimately depend on a confluence of support structures and services found within the institutional context as well as those provided by programs outside the formal institutional structure. For example, among those demonstrating an increased likelihood of dropping out of college are students with histories of childhood abuse (Duncan, 2000), and retraumatization while in college has been reported to be highly probable for college students with prior experiences of physical or sexual abuse (Banyard & Cantor, 2004). In addition, studies show that college graduation rates decrease substantially in the presence of a disability, and especially for students with severely debilitating conditions (Brown, Takahashi, & Roberts, 2010; DeBerard, Glen, & Deana, 2004; Frieden, 2005). While most colleges and universities are sufficiently equipped to respond to students' health needs, few possess sufficient understanding of how specific aspects of the college experience may act to reduce students' risk-factors (Sax, 1997).

Effective student support mechanisms tend to be associated with non-academic support programs such as those targeting social relationships

and creating supportive communities aimed at helping students adjust to and navigate college life (Mechur Karp, 2011; Scott-Clayton, 2011). Mentoring has also been identified as beneficial for providing students with support that enhances college transitions, outcomes, and fostering educational aspirations (IHEP, 2011). In their study of dimensions of problem-focused and emotion-focused coping among 203 college students, Struthers et al. (2000) found evidence suggesting that coping is a learned trait that, along with academic performance, can be improved by increased motivation. Struthers and colleagues suggested that student coping would ultimately benefit from utilizing campus-based services that teach students study skills and time management strategies and by faculty who understand the connections between motivation, performance, and coping.

The evidence points to the need to develop constructs that capture the multidimensionality of coping strategies employed by college students. To that end, Sheu and Sedlacek (2004) examined attitudes towards seeking help and coping strategies among first-year college students and tested for differences by gender and race. Results from their single-institution study suggested that male (vs. female) students and Asian (vs. White and vs. Black) students were more likely to utilize avoidant coping strategies. Females were found to be more likely than men to utilize health-related services, and Black students appeared more willing to seek help with time management and study skills than their Asian and White counterparts (Sheu & Sedlacek, 2004).

Adding to this literature, Ackermann and Morrow (2007) made an important contribution by conducting a principal component analysis of a single institution sample of college students. Their results identified six distinct coping strategies: (1) planning and self-management, (2) seeking support from institutional resources, (3) seeking support from friends, (4) seeking support from family, (5) spirituality, and (6) escape through substance use. With the exception of coping through escape, the other five components represent positive means of coping with the college environment through problem-focused strategies (planning and self-management and seeking support from institutional resources) and emotion-focused strategies (spirituality, seeking family support, seeking support from friends). Analyses of the six components revealed gender differences in coping strategies. Reinforcing the findings from Sheu and Sedlacek's (2004) study, Ackermann and Morrow found that men more often engaged in avoidance coping strategies such as substance abuse.

COLLEGE READINESS AND SUCCESS

Studies of entering college students have shown the importance of student and family characteristics, as well as social contexts in understanding perceptions and choices surrounding college enrollment (e.g., Crockett et al., 2007; Engberg & Wolniak, 2010; Paulsen & St. John, 2002; Perna, 2006, Perna & Titus, 2005). It is well documented that students from higher socioeconomic households—those households in which parents' possess higher income and educational levels—have access to the kinds of resources that increase the likelihood of successfully transitioning to college (Bastedo & Jaquette, 2011; Engberg, 2012; Grodsky & Jackson, 2009; Horn, 1997; McDonough, 1997). Adding to this research, a host of policy reports have focused on risk factors and support mechanisms for students preparing for and transitioning into college (e.g., Domina, 2009; Horn et al., 1998; IHEP, 2011; Kaufman & Bradbury, 1992).

Once in college, studies have highlighted the positive influence of several "protective factors" (Katz, 1997) that may enhance a college student's ability to stay in good standing and progress towards a degree when confronted with challenging circumstances. Key among those protective factors are ongoing strong relationships with parent figures and/or high expectations for academic success (Engle, Bermeo, & O'Brien, 2006; Katz, 1997). The amount and type of financial aid received has also been shown to significantly influence outcomes such as college enrollment and persistence (Perna, 2006). At the same time, significant class-based differences exist in the relationship between financial aid and college outcomes, particularly for students who are most financially at risk (Paulsen & St. John, 2002).

Personality or noncognitive traits frequently shown to be positively associated with measures of college success and overcoming adversity across a diverse range of college students include self-efficacy, motivation, and resilience or "grit" (Banyard & Cantor, 2004; Duckworth, Peterson, Mathews, & Kelly, 2007; Sedlacek, 2004; Stage, 1989; Wang & Gordon, 1994). For example, the noncognitive factors Sedlacek (2004) identified as important correlates of college success among non-traditional students included variables such as access to a strong support person and measures of self-concept. Duckworth et al. (2007) focused on perseverance, overcoming adversity, and long-term goal orientation to examine undergraduate student achievement. Adding to this literature is a body of research examining self-efficacy. Building on Bandura's (1977) notion that self-efficacy influences college outcomes by way of enhanced motivation, several studies have found evidence that academic dimensions of self-efficacy are important predictors of college grades, persistence, and aspects of career

development (e.g., Gifford, Briceño-Perriott, & Mianzo, 2006; Gore, 2006; Kitsantas, Winsler, & Huie, 2008; Pajares, 1996; Wright, Jenkins-Guarnieri, & Murdock, 2013). Zajacova, Lynch, and Espenshade (2005) contributed evidence on the relative influence of stress and self-efficacy on the academic performance of non-traditional (predominantly immigrant and minority) college students.

Based on our review of the literature, evidence indicates a student's ability to cope with the college environment is associated with a host of positive educational outcomes, such as academic motivation, engagement, and progression towards completion, and that protective factors such as strong relationships with others—and that noncognitive traits are associated with many of the same outcomes. What has not been previously examined is if, and to what extent, protective factors and individual student characteristics may together influence dimensions of coping with the college environment. The present study contributes to the literature in this way. By including in the analyses a set of measures identified as important for capturing the influence of student inputs and college environments, our results provide evidence on the unique effects of students' socio-demographic backgrounds, psychosocial characteristics such as self-efficacy and academic motivation, and malleable factors related to access to and utilization of services and supports including mentoring, sponsored awards and financial aid, and campus-based services (Astin, 1993; Pascarella, 1985; Struthers et al., 2000; Tinto, 1993; Zajacova et al., 2005). In addition, by examining a broad sample of college students and by predicting each scale within a multivariate framework we add new evidence on the validity of Ackermann and Morrow's (2007) Coping with the College Environment Scales.

RESEARCH CONTEXT

The study represents one part of a comprehensive research effort designed to identify areas of disadvantage and to describe why certain students are able to succeed academically despite their different risk factors. Data resources for the study stem from a survey administered in 2012 to all enrolled undergraduate recipients of a scholarship award from the Horatio Alger Association (HAA) Scholarship Program. These students were enrolled in a variety of different stages of undergraduate education and across a range of four-year postsecondary institutions. The distinguishing characteristics of HAA Scholars include the level of adversity they have experienced and their challenging life circumstances prior to entering college, in combination with demonstrated academic potential and active involvement in their schools and communities. While the unique qualities

of the HAA Scholars limit our ability to generalize their educational experiences and outcomes to the broader population of college students, information on the HAA Scholars as they progress through college provides a unique and valuable opportunity to examine individual attributes, support structures and educational experiences that affect students' abilities to overcome adversity and to achieve educational and life success.

THE HORATIO ALGER ASSOCIATION SCHOLARSHIP PROGRAM

The HAA Scholarship Program is one of the longest running and largest need-based college aid programs in the United States. Since 1984, the HAA has awarded nearly $90,000,000 in scholarships to more than 16,000 high school graduates and members of the armed forces, supporting them in the pursuit of a college education. On average, the HAA Scholarship Program receives over 30,000 applications per year, approximately 8,000 of which are fully completed and reviewed. From this applicant pool, more than 100 National Scholarships and approximately 800 State Scholarships are awarded annually to students from all 50 states, Puerto Rico, and the District of Columbia. The direct monetary award ranges from $20,000 among National Scholars, to roughly $5,000 among state and other scholarship recipients, distributed throughout the Scholars' college years. Scholars receive additional support in the form of laptops, internship opportunities, and other financial matching gifts provided through college and university partnerships. In order to stay in the program and continue receiving support services and monetary awards, Scholars are required to maintain a grade point average of at least 3.0. For Scholars who continue to face the kinds of adversity they experienced prior to college, the HAA program provides additional support through access to a crisis hotline. Altogether, the HAA Scholarship Program is an individualized, multifaceted, and comprehensive effort to support its scholarship recipients (for more information on the HAA Scholarship Program, see https://www.horatioalger.org/scholarships/index.cfm).

The defining quality among the population of HAA Scholars is the level of adversity they have experienced prior to applying to the HAA Scholarship Program, in combination with having maintained aspirations for a postsecondary education. Scholarships are awarded based on a panel review process that takes in to account applicants' financial need, high school grades, and involvement in cocurricular and community activities. At the center of the selection process is a weighting algorithm that ranks applicants according to critical financial need, adversity, academic achievement, work history, community service, and extracurricular school involvement.

In 2012, the 101 recipients of the HAA National Scholarship achieved on average a high school grade point average (GPA) of 3.7 and SAT score of 1607 (ACT score of 24.7), while stemming from households that earned on average annual incomes of just over $16,000. The nearly 800 recipients of the HAA State Scholarship similarly maintained a high school GPA of 3.6, SAT score of 1566 (ACT score of 23), and came from homes that earned an average of $21,500 per year. In terms of adversities experienced during high school, more than 85% of the HAA National and State Scholars contained in our analytic sample had critical financial need, about 40% experienced the death, incarceration, or abandonment of a parent or guardian, one-third lived in a household with alcohol or drug abuse, and a roughly 12% had experienced homelessness. Results from the present study should be viewed in lieu of the unique qualities of the study population.

METHODS

DATA

Data for the study were based on a 2012 Undergraduate Survey adminis-tered to all HAA Scholarship award recipients who were enrolled in col-lege during the 2011–2012 academic year. The Undergraduate Survey was administered as an online questionnaire between December 16, 2011 and January 31, 2012, yielding 1,872 completed cases for a 44% response rate. The information gathered from the Undergraduate Survey consisted of socioeconomic and demographic backgrounds; experiences with and at-titudes towards adversity; educational experiences; financial aid; career preparation and aspirations; mentors and role models; attitudes related to students' community, politics and society, and self; and access to HAA program services.

After accounting for missing data in the variables contained in the mod-els, the analytic sample consisted of 1,496 enrolled college students. As shown in Table 1, the majority of respondents were female (66%) and White (54%). Nearly two out of every five (38%) students in the analytic sample were first-generation college students, and had experienced an average of 2.5 serious adversities prior to college. In terms of exposure to mentors, 42% of the analytic sample had a mentor during high school and 35% had a mentor while in college. Recipients of the HAA National Scholarship comprised 15% of the sample, while 85% were recipients of HAA's other, less sizable awards. Two out of every three students analyzed received other (non-HAA) sponsored awards. In addition, to cover their educational expenses, students in the analytic sample relied relatively less

Table 1. Descriptive Statistics Among 2011–2012 Enrolled College Students (N = 1496)

Variables analyzed	Mean	SD	Min	Max	Label
Socio-demographic and Background Characteristics					
Female	0.66	0.47	0.00	1.00	*Female*
Asian	0.10	0.30	0.00	1.00	*Asian*
White	0.54	0.50	0.00	1.00	*White*
Black	0.16	0.36	0.00	1.00	*Black*
Hispanic/Latino	0.10	0.30	0.00	1.00	*Hispanic*
Other and Multiple races	0.10	0.30	0.00	1.00	*Other/multiracial*
First-generation College Student	0.38	0.49	0.00	1.00	*First-generation*
Adversities experienced	2.52	1.62	0.00	7.00	*Adversity*
Academic and Psychosocial Constructs					
Academic motivation *(alpha = 0.758)*	0.00	0.59	-2.37	1.00	*Academic motivation*
Self-efficacy *(alpha = 0.749)*	0.01	0.64	-2.93	0.96	*Self-efficacy*
Exposure to Mentoring					
Had a mentor during high school	0.42	0.49	0.00	1.00	*HS mentor*
Have a mentor currently in college	0.35	0.48	0.00	1.00	*College mentor*
Sponsored Awards and Financial Aid					
Received HAA National Scholarship (vs. other HAA award)	0.15	0.36	0.00	1.00	*HAA national scholarship*
Received any other sponsored award	0.66	0.47	0.00	1.00	*Other award*
Institutional and State grants and scholarships[1]	3.91	1.27	0.00	5.00	*Grants & scholarships*
Loans[1]	1.84	1.86	0.00	5.00	*Loans*
Frequency of College Services Utilized					
Health and counseling services *(alpha = 0.784)*	-0.08	0.65	-0.54	4.02	*Health services*
Career, financial aid, and academic advising *(alpha = 0.799)*	-0.06	0.70	-1.12	3.49	*Career & enrollment services*
Study skills and writing services *(alpha = 0.653)*	-0.06	0.78	-0.78	2.64	*Academic services*
Coping with the College Environment					
Planning and self-management *(alpha = 0.759)*	0.05	0.66	-2.92	0.98	*Planning & Self-management*
Institutional resources *(alpha = 0.828)*	0.02	0.76	-1.37	1.85	*Institutional resources*
Family and friends *(alpha = 0.726)*	0.01	0.80	-1.50	1.59	*Family & friends*

SOURCE: 2012 HAA Undergraduate Survey

Notes: In addition to the variables shown, the study included dichotomous measures to control for students within HAA Scholarship years 2000 to 2011. The majority of enrolled students were Scholarship recipients in the years 2011 (28.9%), 2010 (20.9%), 2009 (19.9%), 2008 (19.0%), and 2007 (8.2%). The remaining 3.1% were 2006 to 2000 recipients.

[1] Grants and loans were based on the survey question: How much of the past year's educational expenses (room, board, tuition, and fees) were covered from the following sources? Response options included: 0 = None, 1 = Less than $1,000, 2 = $1,000–$2,999, 3 = $3,000–$5,999, 4 = $6,000–$9,999, 5 = $10,000 or more.

on loans and more on sources of financial aid that do not require repayment (institutional, state, or other scholarships and grants).

In addition to descriptive statistics, we have generated zero-order correlations among the study's variables. As presented in Appendix A, correlations ranged in value from 0.00 to 0.40 among the study's independent variables (not including the correlations among ascribed categorical characteristics, such as between being Black and White, which are negative and not amenable to interpretation). Relatively large and statistically significant ($p < 0.05$) correlations were found between: (i) academic motivation and coping through planning and self-management ($r = 0.36$); (ii) having a mentor during high school and during college ($r = 0.40$); (iii) coping through use of institutional resources and utilizing academic services ($r = 0.35$); and (iv) among all three measures of utilizing campus services ($r = 0.44$ to 0.55). It is common to use Cohen's (1988) guidelines to interpret coefficient size, where 0.10, 0.30, and 0.50 represent small, moderate, or large associations, respectively. However, while correlation coefficients are useful for identifying associations between pairs of variables, one should employ caution when interpreting magnitudes which differ according to the study's design (Hempill, 2003) and do not account for confounding factors.

VARIABLES

Outcome Variables

The outcome variables consists of three factorially derived constructs based on 20 survey questions adapted from Ackermann and Morrow (2007), in which students were asked: *When confronted with stressful situations, how often do you deal with stress in any of the following ways?* Students indicated how often they use various strategies on a four-point scale (0 = Never, 1 = Sometimes, 2 = Often, 3 = Very often). The three components that resulted from the factor analysis and demonstrated sufficient interitem reliabilities mirrored elements of Ackermann and Morrow's results, as follows: (1) planning and self-management (six items, *alpha* = 0.759); (2) seeking support from institutional resources (five items, *alpha* = 0.828); and (3) seeking support from family and friends (three items, *alpha* = 0.726). Table 2 presents the constituent items for each scale, reflecting three of the six scales Ackermann and Morrow developed. Items related to escaping through substance use (e.g., drinking, smoking, etc.), and spirituality (e.g., reading the bible, praying, attending church) did not converge into reliable factors, while items found within two of Ackermann and Morrow's scales (seek support of friends and seek support of family) converged into

Table 2. Constituent Items for Coping with College Environment Scales

Planning and Self-management (*alpha* = 0.759)
    I try to do a better job of managing my time / getting more organized
    I try not to procrastinate when assignments are due / or I start assignments early
    I try to get enough sleep
    I try to prioritize my assignments
    I try to keep a positive outlook
    I focus on the future
Institutional Resources (*alpha* = 0.828)
    I talk to my professors
    I talk to my academic advisor
    I ask my classmates for help
    I ask my professor for help
    I join study groups
Family and Friends (*alpha* = 0.726)
    I talk on the phone about what is stressing me out
    I talk to my friends about what is stressing me out
    I talk to my family about what is stressing me out.

SOURCE: 2012 HAA Undergraduate Survey

Note: All items were adapted from Ackermann and Morrow (2007) and based on the question: When confronted with stressful situations, how often do you deal with the stress in any of the following ways? 0 = Never; 1 = Sometimes; 2 = Often; 3 = Very often. Additional items that failed to load into a single construct with *alpha* > 0.600 include: I go to an on-campus event (e.g., lecture, meeting) with friends; I talk to a school counselor; I smoke a cigarette; I hang out with friends; I go out and party; I read the Bible, pray, go to church/temple.

a single "family and friends" construct. Our factor analysis thus resulted in three reliable scales that capture dimensions of positively coping with the college environment.

Independent Variables

The independent variables included measures of institutional and program services and support systems related to mentoring (having a mentor while in high school and having a mentor during college), sponsored awards and financial aid received (receipt of the HAA National Scholarship versus other HAA Scholarship awards; receipt of any other sponsored program awards; and the amount of educational expenses covered through grants, scholarships, or loans), and the frequency of college services utilized. The measures of college services utilized were

scaled constructs adapted from the Cooperative Institutional Research Program's (CIRP) 2011 Your First College Year Survey, representing health and counseling services (three items, *alpha* = 0.784), career services and academic advising (three items, *alpha* = 0.799), and academic advising and writing support (two items, *alpha* = 0.653). Table 3 lists the constituent items contained in each scale.

Control Variables

A variety of measures were included in the analytic models to account for sociodemographic and other background characteristics (gender, race/ethnicity, first-generation college student, and adversities experienced during high school), as well as two scaled constructs: one representing academic motivation (eight items, *alpha* = 0.758), and another representing self-efficacy (seven items, *alpha* = 0.749). Both are shown in Table 3. We additionally included a set of dummy variables to control for the year students received the HAA Scholarship award.

ANALYSIS

Our analytic strategy consisted of a two stage design. The first analytic stage consisted of multivariate linear regression in which each of the three Coping with the College Environment Scales were regressed on three blocks of variables: (1) socio-demographic and background characteristics, (2) academic and psychosocial constructs, and (3) services and supports consisting of exposure to mentoring, sponsored awards and financial aid, and frequency of college services utilized. Each block of variables was incrementally entered into the model to identify the unique variance explained per block, and to isolate the net effects of variables within each block on dimensions of Coping with the College Environment. Because students are clustered according to the year they applied to and received the HAA Scholarship award, we included a set of dummy variables in every model analyzed to control for students' application year. By estimating fixed-effects models in this way we controlled for the average effects of application year (and number of years students had received HAA program support), while focusing the analyses on the primary independent variables (Kreft, 1996).

   The second analytic stage included testing for conditional effects by gender, identifying as a student of color (Asian, Black, Hispanic, or Other/Multiracial), the number of adversities experienced prior to college, and HAA Scholarship application year as a proxy for year of initial college entry. Based on a significant improvement in overall model fit (i.e., statistically significant increase in R^2) in combination with

Table 3. Constituent Items for Academic Motivation, Self-Efficacy, and College Services Scales

Academic Motivation *(alpha = 0.758)*[1]

    I am willing to work hard in a course to learn the material even if it won't lead to a higher grade.

    When I do well on a test, it is usually because I am well prepared, not because the test is easy.
    In high school, I frequently did more reading in a class than was required simply because it interested me.
    In high school, I frequently talked to my teachers outside of class about ideas presented during class.

    Getting the best grades I can is very important to me.

    I enjoy the challenge of learning complicated new material.

    My academic experiences will be the most important part of college

    My academic experiences will be the most enjoyable part of college.

Self-Efficacy *(alpha = 0.749)*[2]

    I feel good about myself

    I don't have enough control over the direction my life is taking (reverse coded).

    In my life, good luck is more important than hard work for success (reverse coded).

    I feel I am a person of worth, the equal of other people.

    I am able to do things as well as most other people.

    Every time I try to get ahead, something or somebody stops me (reverse coded).

    My plans hardly ever work out, so planning only makes me unhappy (reverse coded).

Frequency of college services utilized: Health and counseling services *(alpha = 0.784)*[3]

    Student health services

    Student counseling services

Table 3. Continued

    Disability resource center

Frequency of college services utilized: Career, financial aid, and academic advising *(alpha = 0.799)*[3]

    Financial aid advising

    Career services

    Academic advising

Frequency of college services utilized: Study skills and writing services *(alpha = 0.653)*[3]

    Study skills advising

    Writing center

[1] Please indicate the extent to which you agree or disagree with the following statements. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree. Items adapted from WNSLAE (2012).

[2] Please indicate the extent to which you agree or disagree with the following statements. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree. Items adapted from the Wabash National Study of Student Learning (WNSLAE, 2012).

[3] Since entering college, how often have you utilized the following services? 0 = Never; 1 = 1 or 2 times per term; 2 = 1 or 2 times per month; 3 = Once a week; 4 = 2 or 3 times per week; 5 = Daily. Items adapted from Your First College Year Survey (CIRP, 2011).

statistically significant individual interaction terms, we re-estimated the model among subsamples disaggregated according to the student characteristics identified from significant interaction terms (e.g., females only, first-year students only, etc.). This approach allowed us to compare the relative strength of the independent variables among different subpopulations of students (see Pedhazur, 1982).

LIMITATIONS

We have identified at least three key limitations to the study that should be taken into consideration when interpreting the results. First, while studying populations of college students from adverse backgrounds is a worthwhile endeavor, it is important to note that the particular cohort of students in our study does not represent a generalizable population of college students. For example, compared to national averages, the scholarship recipients examined in the study came from considerably lower socioeconomic households, and were academically higher achieving and more involved in community activities while in high school (Wolniak et al., 2011). Despite this limitation, by analyzing data among a unique sample of scholarship recipients who have been awarded the scholarship based on their academic standing in combination with exposure to severe adversity and adverse conditions prior to college, the study offers a lens into the utility of support services for students who run a greater risk of failure.

Second, we are aware of no previous studies that sought to predict coping with college environment measures within a multivariate framework, and we recognize that other researchers may prefer alternative approaches to operationalizing and specifying the analytic model. Other individual or contextual factors not assessed as part of this study may have had important effects on dimensions of college coping, and future studies may consider including additional variables according to a particular policy or institutional practice. In order to maintain parsimony, we selected variables based on the evidence contained in past literature on college coping, readiness, and success.

Third, the study's variables were based on self-reported survey data. Self-reported measures have been thoroughly critiqued in the survey methodology, psychology, and higher education literature, containing warnings about bias and stating concern that college students lack the ability to reliably recall and understand complex processes when filling out a survey (e.g., Herzog & Bowman, 2011; Nisbett & Wilson, 1977; Porter, 2011). While a thorough review of this literature is beyond the scope of this paper, we were careful to reduce self-reported bias. Most notably, by adapting and refining for clarity survey items from well-established and validated survey

projects, by capturing information from a large, multi-institutional student sample, and by examining first-year and non-first-year students separately, we have made every attempt to reduce the threat of bias in our analyses.

RESULTS

With our first set of analyses we regressed each of the Coping with the College Environment Scales on variables consisting of socio-demographic and background characteristics, academic and psychosocial constructs, and a variety of services and supports that students come in contact with during college. Table 4 presents the resulting estimated effects, where the unstandardized metric coefficient estimates (*B*) represent the average, statistically adjusted change in the dependent variable that is expected from a unit increase in the predictor variable, in the original units of measure. Also shown in the table are standardized coefficient estimates (*Beta*) representing the standard deviation (*SD*) change in a dependent variable associated with a one *SD* change of the independent variable, holding constant all other variables in the model. *B* coefficients are useful for comparing effect sizes between models with the same dependent variable, while *Beta* coefficients are useful for comparing the effects sizes of specific variables within a given model. Each block of predictor variables accompanies an associated coefficient of determination (R^2), indicating the percent of variance in the dependent variable that is explained by the block of variables simultaneously.

Table 4 illustrates that socio-demographics and background characteristics explain considerably more variance in coping with college through the support of family and friends (9.3% or $R^2 = 0.093$) than either of the other coping scales. Specifically, female students are significantly more likely than males to cope with the college environment through the support of family and friends (*B* = 0.478, *Beta* = 0.282), and White students are more likely to draw on family and friends to cope than their Asian (*B* = -0.270, *Beta* = -0.102), or Black (*B* = -0.135, *Beta* = -0.062) counterparts. In addition, the more students experienced adversity prior to college, the less they utilized family and friends to cope with college stress (*B* = -0.031, *Beta* = -0.063), possibly reflecting that the adversities experienced prior to college may have been closely tied to family or social circles and served to detach students from past acquaintances. Female (vs. male) students also more often utilized planning and self-management to cope with college (*B* = 0.137, *Beta* = 0.098).

Across all three dimensions of college coping, academic motivation and self-efficacy were strong, positive predictors. This was particularly true for coping through planning and self-management, in which students' levels of academic motivation and self-efficacy accounted for nearly 18% of the variance explained ($R^2 = 0.175$), and roughly 80% of the variance

Table 4. Estimated Effects of Services and Support Systems on Coping with the College Environment (N = 1496)

	Planning & self-management			Institutional resources			Family & friends		
	B	Beta		B	Beta		B	Beta	
1. Socio-demographic and Background Characteristics									
Female	0.137	0.098	***	0.033	0.020		0.478	0.282	***
Asian (vs. White)	0.066	0.030		0.038	0.015		-0.270	-0.102	***
Black (vs. White)	0.033	0.018		-0.031	-0.015		-0.135	-0.062	*
Hispanic (vs. White)	-0.013	-0.006		-0.112	-0.043		-0.136	-0.050	
Other/multiracial (vs. White)	-0.023	-0.010		-0.092	-0.036		-0.096	-0.036	
First-generation	-0.007	-0.005		-0.028	-0.018		-0.034	-0.021	
Adversity	-0.009	-0.023		-0.017	-0.036		-0.031	-0.063	*
Block R-sq		0.024	***		0.017	***		0.093	***
2. Academic and Psychosocial Constructs									
Academic motivation	0.334	0.296	***	0.265	0.204	***	0.054	0.040	
Self-efficacy	0.266	0.260	***	0.075	0.063	**	0.158	0.127	***
Block R-sq		0.175	***		0.081	***		0.021	***
3. Services and supports									
Exposure to Mentoring									
HS mentor	-0.029	-0.021		0.049	0.032		0.121	0.075	**
College mentor	0.022	0.016		0.204	0.127	***	0.048	0.029	
Sponsored Awards and Financial Aid									
HAA national scholarship	0.047	0.026		0.055	0.026		0.011	0.005	
Other award	-0.003	-0.002		0.032	0.020		0.004	0.003	
Grants & scholarships	0.007	0.013		0.006	0.010		-0.001	-0.001	

Table 4. Continued

	Planning & self-management			Institutional resources			Family & friends		
	B	Beta		B	Beta		B	Beta	
Loans	0.014	0.039		0.001	0.004		0.017	0.041	
Frequency of College Services Utilized									
Health services	-0.017	-0.017		-0.010	-0.009		0.134	0.108	***
Career & enrollment services	0.078	0.083	**	0.169	0.156	***	0.029	0.025	
Academic services	-0.027	-0.032		0.218	0.224	***	0.019	0.018	
Block R-sq		0.007			0.122	***		0.028	***
Model R-sq		0.216	***		0.228	***		0.154	***

SOURCE: 2012 HAA Undergraduate Survey

Notes: In addition to the variables shown in the table, every model contained dichotomous measures to control for students within HAA scholarship years (1998 to 2011). The reported Block *R-sq* for each model is net of the variance explained from the scholarship year variables and the preceding variable block(s).

*p < 0.05, **p < 0.01, *** *p* < 0.001.

explained by the overall model (R^2 = 0.216). In terms of all three coping with college scales, the more academically motivated students were and the greater sense of control they expressed, the more they coped positively when confronted with stress.

In terms of student services and support systems, having a mentor during college significantly increased coping through utilizing institutional resources, while having a mentor during high school was positively associated with drawing on the support of family and friends. The level of HAA Scholarship received (the more sizeable National Scholarship versus other HAA awards), receipt of other sponsored awards, or receipt of grants or loans, had negligible effects on students' tendencies to cope with college across any of the dimensions. Thus, it appears that financial means of supporting students do not enhance coping strategies related to planning and self-management, drawing on institutional resources, or turning to family and friends. It may be that financial aid is critical for college access and persistence, but not for coping strategies during a given academic year.

Alternatively, students' tendencies to cope with the college environment by way of institutional resources were significantly influenced by frequently utilizing services available on campus. Career and enrollment services (including financial aid advising, career services, and academic advising) were positively associated with coping through planning and self-management (B = 0.078, *Beta* = 0.083), as well as coping through the use of institutional resources (B = 0.169, *Beta* = 0.156). Students who more frequently used academic services related to studying advice and using the campus writing center were more likely to report institutional resources as a means of coping (B = 0.218, *Beta* = 0.224). Finally, the more frequently students accessed health services such as the student health center or counseling services, the more they consult family members and friends to handle stressors. Altogether, more frequent utilization of college services enhanced students' ability to cope with their college environment through drawing on institutional resources, such as talking with professors, academic advisors, or peer groups (R^2 = 0.122).

The second set of analyses identified that the relationships between services and support and dimensions of coping with the college environment were not general across all students in the sample, but conditional on being a first-year students (see Table 5) and gender (see Table 6). The relationships identified above were not conditional on the level of adversity experienced prior to college or identifying as a student of color. This finding suggests that variables' associations with dimensions of college coping do not vary across students from relatively more versus relatively less adverse backgrounds, or for those who identified as being a Student of color (Asian, Black, Hispanic, or other/Multiracial) versus White. *B* coefficients

are presented in the tables for comparing estimated effects between models based on different subpopulations of students.

As shown in Table 5, the results indicate that having a mentor in college is uniquely helpful among non-first-year students in terms of coping with college through drawing on institutional resources ($B = 0.249$). In terms of college services, among first-year students, coping by way of planning and self-management was significantly and positively related to frequency of utilizing career and enrollment services ($B = 0.205$), while negatively related to accessing health services ($B = -0.144$). For both first-year and non-first-year students, utilizing career and enrollment services was positively related to coping through the use of academic advisors, classmates, study groups, and other institutional resources, while the relationship was significantly greater among first-year students ($B = 0.316$ vs. 0.087).

Table 6 presents estimated effects conditional on gender. Specifically, having a mentor while in high school significantly increased the tendencies of female students to draw on the support of family and friends ($B = 0.114$). Differences were also found in the relationship between coping through family and friends and receiving sponsored awards or loans. Unique among female students, the more loans they took out to help cover the costs of attending college, the more they drew upon the support of family and friends to cope with college ($B = 0.027$). Unique among male students was the negative association between receiving sponsored awards

Table 5. Estimated Metric Effects (B) of Services and Support Systems Conditional on First-Year Student Status

Services and supports	Planning & self-management				Institutional resources			
	First-Year Students		Non First-Year Students		First-Year Students		Non First-Year Students	
Exposure to Mentoring								
College mentor							0.249	***
Frequency of College Services Utilized								
Health services	-0.144	*						
Career & enrollment services	0.205	***			0.316	***	0.087	*^
Model R-sq	0.321	***	0.198	***	0.339	***	0.199	***

SOURCE: 2012 HAA Undergraduate Survey

Notes: All estimated interaction effects were based on the fully specified models shown in Table 2. Sub-sample of first-year students: $n = 433$. Sub-sample of non first-year students: $n = 1063$.

$*p < 0.05$, $**p < 0.01$, $*** p < 0.001$.

^ Estimated (B) coefficients for First-Year vs. Non First-Year students significantly differ at $p < 0.01$.

Table 6. Estimated Metric Effects (B) of Services and Support Systems Conditional on Gender

Services and supports	Institutional resources		Family & friends	
	Female	Male	Female	Male
Exposure to Mentoring				
HS mentor			0.114 *	
Sponsored Awards and Financial Aid				
Other award				-0.147 *
Loans			0.027 *	
Frequency of College Services Utilized				
Health services			0.163 ***	
Academic services	0.257 **	0.144 **^		
Model *R*-sq	0.235 ***	0.259 ***	0.090 ***	0.129 ***

SOURCE*:* 2012 HAA Undergraduate Survey

Notes: All estimated interaction effects were based on the fully specified models shown in Table 4. Sub-sample of female students: *n* = 989. Sub-sample of male students: *n* = 507.

*p < 0.05, **p < 0.01, *** *p* < 0.001.

^ Estimated (*B*) coefficients for Female vs. Male students significantly differ at *p* < 0.10.

other than the HAA scholarship and drawing on the support of family and friends (*B* = -0.147). Furthermore, the kinds of college services utilized differed in their associations with coping between females and males. Utilizing campus health services was associated with coping through support of family and friends only among female students (*B* = 0.163). In addition, while utilizing academic services was positively associated with drawing on institutional resources for coping with college stress, the relationship was stronger among female students (*B* = 0.257 vs. *B* = 0.144).

DISCUSSION AND IMPLICATIONS

The current study employed multivariate regression techniques specifically to improve our understanding of the factors that influence the ability of students from adverse backgrounds to cope with the college environment. Data were collected as part of the 2012 Undergraduate Survey administered to all HAA Scholarship award recipients who were enrolled in college during the 2011–2012 academic year. By analyzing data among a unique sample of scholarship recipients who have been awarded the scholarship based on their academic standing in combination with exposure to severe adversity and harsh background conditions, the study offers a lens into the utility of support services for students who run a greater risk of failure.

Our analyses addressed two research questions. The first question asked about the services and supports that are related to scaled measures of coping with the college environment among our sample of college students. The second question examined if the relationships found were conditional on students' gender, year in college, or level of adversity experienced prior to college. In answering these questions, the results yielded five main findings.

First, mentoring in college was positively associated with coping with college by seeking support from institutional resources, while mentoring during high school was positively associated with coping by seeking support from family and friends. This finding confirms earlier reports from Ackermann and Morrow (2007) regarding the type of supports sought out by college students in their attempts to better cope with college life. In our analytic sample there is an apparent shift in mentoring between high school and college. During high school years family and friends were the main source of support, while Scholars tend to rely more on integrated institutional resources for support during college. In their article Ackermann and Morrow hypothesized that "students do not turn to their friends and family about issues related to classroom comfort" (p. 144). Based on our results, one could argue that a common support mechanism during both high school and college is that of ease of access relative to physical proximity and availability, rather than type of stressor (coping with life issues versus coping with academic challenges). In that regard, institutional resources (teachers, counselors, etc.) did not demonstrate strong correlations with mentoring in high school, nor did family and friends demonstrate strong correlations with mentoring in college.

This evidence points to the need to further examine the relationship between having a mentor and college coping. College mentorship can be somewhat limited by design due to institutional constraints on human resources. In contrast, during the high school years family and friends "can be there when you need them," offering emotional support and advice to students without restrictions. For college students, the prescribed nature of institutional mentoring may therefore negatively impact their perceptions of the quality of available support services and levels of trust towards the available mentoring services found on their college campus. Examining the availability, delivery, and effectiveness of mentoring services across different college contexts, and across students from different backgrounds, offers a salient direction for future study.

Second, sponsored awards and financial aid had negligible general influence across the three dimensions of Coping with the College Environment, while the relationships uncovered were conditional on gender. While this finding seems to run contrary to the larger challenges facing today's youth

in managing college financing and the associated stress, the results are somewhat consistent with Paulsen and St. John's study (2002) showing that among poor and working-class students, choosing a college because of low tuition or financial aid considerations had negative or no effect on persistence. Paulsen and St. John attributed the findings to class-based differences in perceptions and expectations related to college costs. In terms of our results, all study participants were recipients of at least some financial assistantship through the HAA Scholarship program (15% of the analytic sample received HAA National Scholarships, 85% received other HAA awards), and 66% of the sample received more than one sponsored scholarship award. Not having to personally procure funds for either the entire tuition cost or a large part of it, and being less reliant on loans, could explain why someone might not employ different coping strategies based on financial aspects of college. In other words, the existence of financial support during college may subdue the perceived importance and influence on coping with the college environment.

Third, students' ability to cope with the college environment through planning and self-management, seeking support from institutional resources, and seeking support from family and friends was positively associated with frequency of utilizing college services, though different services predicted different dimensions of coping. Strong internal regulation (such as planning and self-management) and increased levels of connectedness (based on utilizing institutional resources) appear to be critical elements in sustaining or increasing "adaptive capacity"; a term used by Zolli and Healy (2012) to describe a person's ability to adapt to changed circumstances while fulfilling one's core purpose. This finding offers insight into the relationship between available college services, frequency of use, and coping tendencies. One could argue that there is a cyclical dynamic between planning, self-management and physical connectedness on one end, and frequency of utilizing college services on the other. Increased use of college services enhances internal regulation, as well as connectedness to the college community. However, more work is needed to understand how institutional resources may promote basic planning, self-management, and participation traits among students from adverse backgrounds, and to foster more frequent and undeterred use of college support services to strengthen students' adaptive capacities.

Fourth, self-efficacy was the only variable in the model to have a significantly positive association with all three dimensions of coping with the college environment, while academic motivation was significantly associated with two of the three dimensions (planning and self-management, and seeking support from institutional resources). This finding compliments Zajakova et al.'s (2005) study of 289 entering college students, in which self-efficacy was found to be the strongest predictor of academic performance.

Similarly, Gifford et al. (2006) in their study of over 3,000 first year students demonstrated the positive effects of self-esteem and internal locus of control in attaining higher GPA scores. Our results further support findings from Kitsantas et al. (2008) study of 243 undergraduate, predominantly first-semester students at a large, public university who enrolled in introductory-level courses; for these students, self-efficacy and time management skills were strong predictors of academic performance during the first semester.

Among the specific population of our study who experienced severe adversity in their lives, self-efficacy perceptions could be viewed through a particular lens. Rana, Qin, Bates, Luster, and Saltarelli (2011) use the term "survival optimism" to describe notions of self-efficacy among Sudanese youth that have relocated to the United States and demonstrate educational resilience. These young men and women, having survived the horrors of civil war and armed conflict in their native country managed to maintain a sense of confidence about their prospect in graduating high school and college in the United States. To a certain degree, the HAA Scholars included in our study similarly demonstrated a form of "survival optimism"; although they did not experience conflict within a war zone, many of them were exposed to prolonged incidents of urban strife, physical, sexual, and psychological abuse, and deprived of basic life qualities. Academic motivation and engagement may be a proxy for "survival optimism," enabling students from adverse backgrounds to effectively draw upon available resources in order to cope with the college environment.

Our results are in agreement with corresponding research on resilience that indicates perceptions of well-being and competence among college students is associated with a healthy sense of self-worth, productive and meaningful engagement with others, and the existence of substantive life goals (Luthar, Cicchetti, & Becker, 2000). If we consider well-being as the end product of successful coping, then findings from our study confirm previous research that identified internal locus of control, social integration and support as positive coping mechanisms (Banyard & Cantor, 2004; Lee, Keough, & Sexton, 2002; Torres & Solberg; 2000).

The fifth and final main finding stemmed from our examination of differences by students' demographic characteristics and year of initial college entry. Our results indicate that White students are more likely to draw on family and friends to cope than their Asian or Black counterpart. This finding should be interpreted in combination with previous research suggesting Black students' harbor more positive attitudes towards seeking help and are more willing than White and Asian students to utilize study and time management skills (Sheu & Sedlacek, 2004).

Furthermore, our examination of conditional effects identified that exposure to mentoring, sponsored awards and financial aid, and frequency

of using college services yielded differential influences on coping with the college environment for females (vs. males) and for first-year (vs. other) students. These results echo findings from the National Evaluation of the Federal TRIO Program's Student Support Services (SSS), which targets low-income, first-generation and disabled students (U.S. Department of Education, 2010). Participation in an SSS program during the first year of college was found to have the largest positive and statistically significant effect on students' GPA scores, semester credits earned, and retention. In addition, our results confirm past findings indicating that female students tend to rely more on emotion-focused coping (Ackermann & Morrow, 2007; Matud, 2004) and complement Sheu and Selackek's (2004) finding that female students may generally be more likely to utilize positive coping strategies. It is thus important for college practitioners to identify gender related differences in coping mechanisms and tailor corresponding services accordingly.

When studying the interaction effects for first-year (vs. other) students, results point towards a process of "reorganizing one's adaptive capacity" upon entering college, a concept Holling (2001) described in his research on resilience. Extending Holling's model to college students, it may be that first year college students experience a release phase upon entering college that entails a global change in overall conditions. Students undergo changes in the external and internal resources developed during their high school years to adapt to, cope with, and succeed in their respective environments. In college, academic demands and expectations become significantly more complex and challenging, and the availability of emotional supports through friends and families may lessen because of distance. Therefore, pre-existing resources might be less applicable or useful to students once in college. At the time of our study, which took place after the end of the first semester for freshmen students, "reorganization" is starting to occur through recombination of, and experimentation with, new and integral resources found through college services. In that sense, institutional resources may be used only on an as-needed basis, and used more frequently during the first college year than in subsequent years as students learn more about the function and usefulness of resources. Such a process fits within the larger changes that occur among college students during their undergraduate years. Echoing the conclusion from their 1991 book, Pascarella and Terenzini (2005) state that "the evidence indicates not only that individuals change on a broad developmental front during college but also that the changes are of a mutually consistent and supportive nature . . . [and] that the changes coincident with college attendance usually involve the whole person and proceed in a largely integrated manner" (p. 578). It falls upon administrators and college practitioners to enhance existing mechanisms, or add new mechanisms, to reach

first-year students and help guide them through their first encounters with institutional processes and resources.

Drawing on 2012 Undergraduate Survey data among a unique population of college student recipients of the HAA Scholarship award, we identified factors associated with dimensions of coping with the college environment. The results provide empirical evidence that may be used to improve student services, resources, and program interventions that enhance students' ability to effectively and positively cope with stressors confronted during college. By analyzing a unique population of students whose backgrounds include exposure to severe adversity and harsh conditions, the findings offer a lens into the utility of resources among students who may benefit most from interventions and additional support.

The study provides additional postulates regarding the impact of support mechanisms that can positively influence college students' trajectories (Ackermann & Morrow, 2007). Results may be used to enhance the postsecondary success of students from the most adverse backgrounds who, based on national indicators, are at greater risk of not completing a postsecondary education, not from a lack of academic ability or aspiration, but due to a lack of resources or the recurrence of adversity (Engberg & Allen, 2011; Horn, 1997; Perna, 2006). By tailoring interventions and designing support programs around the knowledge that students' frequent use of college services and exposure to mentors fosters coping strategies, we can enhance students' abilities to positively manage college stress. What's more, support programs that act to strengthen at-risk students' sense of control over their current circumstances hold the promise of enhancing postsecondary educational experiences. In that regard our results call for a careful recalibration of existing support programs towards identifying and consequently empowering students' internal resources by aligning them with contextual challenges, expectations, and opportunities.

By contributing new empirical evidence on the determinants of different dimensions of coping with the college environment, the study responds to calls for additional research in this arena (Sax, 1997; Struthers et al., 2000), builds on the literature on college coping, readiness and success, and extends Ackermann and Morrow's (2007) initial validation of dimensions of coping with college through analysis of a more robust sample of college students. More generally, the study reaffirms the importance of college scholarship programs in providing researchers a lens through which to study and learn from unique populations of students. Ultimately, the findings we have presented here may be useful for enhancing the design and delivery of institutional measures that illuminate the different coping strategies students employ on any given campus in order to enhance the institution's ability to reach students most in need of additional support.

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APPENDIX

Zero-Order Correlations Among Variables (*N* = 1496)

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
1. Coping: Planning & Self-management	31	25	11	-01	-06	08	02	-01	01	-04	36	31	03	06	-00	-00	02	03	02	11	09
2. Coping: Institutional resources		29	02	02	-09	11	-00	-00	01	-04	29	12	14	19	01	00	-02	02	19	31	35
3. Coping: Family & Friends			28	-11	08	01	-02	-01	-01	-03	10	14	08	07	-03	02	-00	07	12	09	09
4. Female				-07	05	-00	-04	04	06	07	09	-02	-05	00	-12	06	00	09	-03	-05	-01
5. Asian					-37	-15	-11	-11	-05	-12	-01	11	-01	-02	-00	-01	06	-06	01	02	-01
6. White						-47	-36	-36	-09	02	-15	-01	-13	-07	00	02	-03	03	-06	-18	-23
7. Black							-14	-14	01	01	11	08	08	07	-03	-04	-02	09	11	20	24
8. Hispanic								-11	13	-00	08	04	10	00	01	01	-00	-10	-03	02	05
9. Other/multiracial									06	08	05	-02	04	04	03	00	02	01	-01	01	05
10. First-generation										13	10	-04	05	02	01	-07	-03	01	01	02	07
11. Adversity											-01	-11	13	06	25	02	02	05	04	-03	-00
12. Academic motivation												18	10	07	-03	-02	-03	-03	07	18	22
13. Self-efficacy													06	10	-01	02	01	-01	-06	-02	03
14. HS mentor														40	06	01	01	00	05	12	13
15. College mentor															07	07	05	04	02	09	09
16. HAA national scholarship																02	16	-09	01	-00	-05

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
17. Other award																	17	-16	-03	-02	-08
18. Grants & scholarships																		-08	-02	-02	-11
19. Loans																			06	07	06
20. Health services																				55	44
21. Career & enrollment services																					55
22. Academic services																					

SOURCE: 2012 HAA Undergraduate Survey

Note: Underlined values are statistically significant ($p < 0.05$). All decimals were omitted and correlations rounded to the nearest hundredth. Not shown in the table are dichotomous measures of students' scholarship year (1998 to 2011).

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