The Impact of Perceived Barriers, Academic Anxiety, and Resource Management Strategies on Achievement in First-Year Community College Students

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Abstract. The current study explored the impact of internal and external barriers (e.g., academic anxiety, employment) that place subgroups of college students at risk for academic failure in the first year. The mitigating potential of academic resource management strategies (e.g., time-study environment) was also examined. In a sample of 885 first-semester male and female community college students, analyses revealed significant group differences wherein late-starter females (ages 23-27) reported experiencing the highest degree of perceived barriers. This group also demonstrated lower achievement and less effective resource management skills. Although other groups reported similar levels of barriers to academic success, they tended to have fewer decrements in performance than the late starters, perhaps because they have more resource management strategies employed to cope with such barriers. This research provides an avenue for early identification of barriers that may threaten first-year achievement as well as an understanding of factors that facilitate academic resiliency.

Institutions of higher education continue to experience challenges with stagnant retention and graduation rates, despite widespread efforts to address these issues (ACT, 2011, 2012, 2013; Tinto, 2006). Traditional four-year colleges and universities consistently lose between 32% and 35% of their students after the first year; the problem is greater in community colleges, which have a rate of 42-45% (ACT, 2013). Consequently, degree completion rates for students at two-year public institutions are alarming, with only 22% of students completing a degree within a three-year span of time (ACT, 2013). Low retention and completion rates at community colleges have direct economic consequences for the institutions, as higher education funding formulas are generally tied directly to “on-time graduation” rates and student retention (National Conference on State Legislatures [NCSL], 2012). In a broader context, failures of community college systems also negatively impact the community, limiting pathways to career development and economic stability (Myran & Ivery, 2013). These various pressures for community college success have increased the level of attention to academic achievement in order to determine what factors influence successful outcomes, particularly during the critical first year. Within this
framework, we examine the barriers and facilitators to academic success that are common in postsecondary learning institutions. Specifically in this investigation, we review personal, familial, and contextual barriers students recognize in their academic settings, the role of academic anxiety, and resource management strategies employed to mitigate these external and internal impediments to success.

**Literature Review**

**Personal, Familial, and Contextual Barriers to Postsecondary Success**

The picture of today’s college student is complex. Historically, young adults transitioning from high schools comprised the majority of the college student population. However, the contemporary higher education landscape has seen a substantial increase in nontraditional students, particularly females, entering higher education (Advisory Committee, 2012; Complete College America, 2011). This trend is projected to continue, eventually exceeding growth trends expected for traditional students (NCES, 2012). Personal, familial, and contextual factors (e.g., financial barriers, loss of support systems, parenthood, low motivation) force many to take a hiatus from postsecondary education, and the factors that contributed to academic interruption often continue to influence academic success after the individual returns to academia. Even though academic ability is clearly a critical factor for predicting postsecondary achievement (Harackiewicz, Barron, Tauer, & Elliot, 2002; Kitsantas, Winsler, & Huie, 2008; Kowitlawakul, Brenkus, & Dugan, 2013; Robbins et al., 2004), research has confirmed that personal, familial, and contextual factors also negatively impact achievement outcomes (Complete College America, 2011; Scherer & Anson, 2014).

**Contextual and familial barriers.** Specific limiters commonly identified in the research often focus on the students’ background variables, such as first-generation student status (Inman & Mayes, 1999; Pascarella, Pierson, Wolniak, & Terenzini, 2004), racial and ethnic minority (Lynch & Engle, 2010; Watkins, Green, Goodson, Guidry, & Stanley, 2007), and gender – with females generally outperforming males in overall GPA (Alon & Gelbgiser, 2011; Kitsantas et al., 2008). Regarding age, research comparing traditional and nontraditional students also has revealed higher drop-out rates and lower graduation rates for the nontraditional learners (Complete College America, 2011; Kazis et al., 2007).

Other external factors that have been identified as significant in performance outcomes include financial hardship (Harding, 2011), demanding or inflexible work schedules, parental or family responsibilities, and a lack of available and reliable childcare and support systems (Advisory Committee, 2012; De Vito, 2009; Kaplan & Saltiel, 1997; Scherer & Anson, 2014). The traditional explanation for the influence
of stress on performance suggests that as the level of stress exceeds an individual-specific critical point, performance will drop (Yerkes & Dodson, 1908). The key implication of the Yerkes-Dodson law to this domain of study is that as the number of contextual stressors increases, so does the likelihood of performance decline. This makes exploration of the interactions of the various contextual stressors critical. For instance, compared to traditional-aged students, nontraditional-aged learners generally experience a greater number of these pressures outside the scholastic realm, such as raising children, managing a household and family obligations, and engaging in some level of employment, which leads to competition among priorities (Advisory Committee, 2012; De Vito, 2009) and places the students at increased risk for academic failure (Kazis et al., 2007). Although males and females differ in the roles they tend to occupy, gender differences in the impact of external and internal barriers on university achievement have been largely unexplored. Given that nontraditional adults are now the majority student population in higher education (Advisory Committee, 2012), research identifying and understanding differences unique to student age groups necessitates even greater priority.

Naturally, the perceptions students hold for barriers they encounter differ greatly across as well as within population subgroups (e.g., traditional vs. nontraditional, male vs. female; Complete College America, 2011; Ross-Gordon, 2003; Scherer & Anson, 2014). With the changing demographic make-up of today’s typical college student, strategic postsecondary institutions are becoming more cognizant of subpopulations of students and recognizing that academic expectations, goals, and needs vary dramatically among those groups (Bahr 2010, 2011; Hagedorn & Prather, 2005; Hoachlander, Sikora, & Horn, 2003). Awareness of these perceived barriers and challenges is even more critical when examining subgroups within the community college context. Community colleges serve a higher percentage of at-risk students who are often ill-prepared for the rigor in academia and lack essential academic skills that support successful achievement (Scherer & Anson, 2014), promoting their risk for failure (Schmitt et al., 2007) and early withdrawal from the institution (Alarcon & Edwards, 2013).

**Academic anxieties.** One salient class of personal barriers known to adversely affect student performance is academic anxiety (Cassady & Johnson, 2002; Beilock, 2008; Bembenutty, 2008; Chapell et al., 2005; Lynch, 2006, 2010). Anxiety toward academic tasks can occur in specific content domains (e.g., science or math anxiety) or more widely across most all academic subjects and tasks (e.g., evaluation anxiety, school phobia; Cassady, 2010). While there is a wide body of research identifying the link between math, science, or test anxiety and performance declines (Cassady & Johnson, 2002; Beilock, 2008; Bembenutty, 2008; Chapell et al., 2005; Lynch, 2006, 2010), only more recently has the broader construct of academic anxiety been
examined and reliably found to influence achievement negatively (Cassady, 2010; Crede & Kuncel, 2008). This limited focus on the broad construct of academic anxiety has also been restricted to traditional four-year institutions, which is particularly troubling given the characteristics likely to spark academic anxieties for students attending community colleges. As compared to students attending 4-year universities, community college learners are generally less likely to be prepared for academic rigor and more likely to harbor higher levels of apprehension about academics (Complete College America, 2011; Scherer & Anson, 2014).

The unique settings of community colleges also exacerbate the conditions that are already ripe for triggering anxiety responses. Specifically, many community colleges have fewer dedicated student resource facilities to support academic coping than traditional four-year residential institutions (American Association of Community Colleges [AACC], 2012; Lassiter, 2013; Silverman & Williams, 2014). Community colleges are also less likely to promote social connections and outreach directly among their students, activities that are known to help learners reduce social stress and academic anxieties through adaptive coping strategies specific to their educational settings (Calvete & Connor-Smith, 2006; Cole, Matheson, & Anisman, 2007). The challenges facing students in these settings are often exacerbated for nontraditional students, who comprise a larger proportion of community college students. As articulated earlier, nontraditional students face more external barriers to academic success – and when institutional resources are lacking to provide avenues for support for those learners, higher rates of failure are likely (Complete College America, 2011; Kazis et al., 2007).

Self-Regulation Strategies to Manage Stressors

While these barriers are common impediments to success, it has been well established that merely experiencing one of these barriers is not the critical issue related to performance (see Carver & Scheier, 2005; Zeidner & Matthews, 2005). In the face of these barriers, many students demonstrate resilience and perseverance that lead to successful outcomes. Those students who tend to overcome standard barriers to success generally (a) have fewer limiters to academic performance (Gibbons, 2005; Kirkland, 2010), (b) perceive their educational barriers less negatively (Robbins et al., 2004), and (c) have access to greater levels of social support to help cope with the stressors that do arise (Calvete & Connor-Smith, 2006; Garriott, Flores, & Martens, 2013; Robbins et al., 2004).

The differential skills and abilities in navigating the educational landscape that students display are a primary domain of interest in understanding the impact of academic stressors for learners in a community college setting. In general, student coping strategies that utilize social supports and resources have been associated with
effective adaptation and lower levels of distress (Calvete & Connor-Smith, 2006; Lakey & Cohen, 2000). Research has identified several self-regulatory strategies that are effective in helping learners effectively overcome these barriers, including effective time management, creating an environment conducive to study, managing stress and challenges, having a strong support system, and soliciting help from outside resources (Balduf, 2009; Kitsantas et al., 2008; Preckel, Holling, & Vock, 2006; Tuckman, 2003).

Pintrich and his colleagues (Pintrich, Smith, Garcia, & McKeachie, 1991, 1993) developed their self-regulated learning scale to assess these specific skills directly within a complete framework of motivated self-regulatory learning. Within that framework, the skills of allocating appropriate time for study, effective time management, effort regulation and attentional control, adjusting environments to support learning, and seeking assistance when needed to achieve academic goals were considered to comprise a broad subscale known as Resource Management. Studies examining academic success confirm these resource management skills support both course grade outcomes (Lynch, 2006, 2010) and overall academic performance (Kitsantas et al., 2008; Pintrich et al., 1993).

**Theoretical Framework**

The literature on predictors of college student achievement demonstrates that no single factor places any student more at risk than another. The social cognitive perspective (Bandura, 1986, 1997, 1999; Snow, Corno, & Jackson, 1996) provides a widely-used model that categorizes factors associated with student performance and achievement outcomes into three interrelated components: personal factors (e.g., cognitive abilities, affective states), behavioral responses (e.g., study and resource management strategies), and environmental conditions. According to this framework, person-centered variables such as affective states and self-perceptions guide individuals’ behavioral responses. Environmental conditions (e.g., events, social contexts) also influence the personal and behavioral components. All three components interact, and ultimately, the interactions among these components contribute to a variety of student achievement outcomes. Consistent with the perspective forwarded by social cognitive theory, this study was designed to address behavioral, personal, and environmental factors simultaneously to identify patterns related to student achievement in a community college setting.

**Purpose of the Current Study**

Beyond demographic characteristics or prior academic records of students entering higher education institutions, there is often little information available at the institutional level to highlight the academic barriers students will most likely face
Few studies to date have targeted the influence of students’ perceptions of personal, familial, and contextual barriers on academic behaviors and achievement outcomes, and we have identified none that have examined subgroups within the community college population specifically. As discussed before, understanding the influence of barriers needs to include not only the barriers students encounter but also their perceptions of the threat those barriers pose to their academic success. Furthermore, a broader review of current personal, familial, and contextual barriers may prove more valuable for identifying nontraditional students’ experiences than standard demographic variables that are commonly available from institutional assessment studies focused on students coming directly from secondary school settings (e.g., high school GPA, parent income).

Therefore, the current study investigates personal, familial, and contextual barriers reported by subgroups of community college students (i.e., age and gender groups) that may increase the risk for academic failure. This question is of interest because research indicates different challenges raised by males and females as well as differences among students from traditional and nontraditional groups. Based on the prior research, it is hypothesized that late starters (defined as students aged 23-27)—particularly females—will report higher perceived barriers compared to the younger and older students due to (a) increasingly complex life circumstances and demands associated with multiple challenging social roles and (b) fewer established academic coping resources. Furthermore, it is hypothesized that females will report higher levels of anxiety, and it is expected that students in the oldest age group will report greater levels of anxiety sparked by uncertainty related to an extended absence from the academic environment than students in the younger groups (Gast, 2013; Ross-Gordon, 2003).

As these perceived barriers relate to challenges in the external environment, this study also examines differences among students in their use of resource management strategies. It is hypothesized that older students will indicate greater use of resource management behaviors than the younger group of students based on greater experience and knowledge of problem-solving strategies (Blanchard-Fields, Stein, & Watson, 2004; Crawford & Channon, 2002; Labouvie-Vief, 2003) and will report a higher intrinsic motivation to succeed (Bye, Pushkar, & Conway, 2007; De Vito, 2009; Dill & Henley, 1998). Students with more resource management behaviors can allocate sufficient time, manage their environments, and seek assistance effectively to achieve their academic goals when faced with challenges that threaten their academic work. Finally, this study examines group differences in cumulative GPA as a measure of achievement outcomes. It is hypothesized that female students will have higher GPAs than male students, and students in the oldest age group will have higher GPAs than students in the two younger age groups (Kaplan & Saltiel, 1997; TERI, 1996).
Method

Participants

Participants in this study were first-semester students at a Midwestern community college taking a required first-year seminar course. Data were available from 885 students (65% female) aged 18 to 64 ($M = 23.51$, $SD = 8.10$). Consistent with the population served, 86% of the participants identified as Caucasian/White, 7% as African American/Black, 4% as multiracial, and 2% as Hispanic. At the time of assessment, 78% of the participants reported they were single, 12% were married, and 7% were divorced; 31% reported they had children under their care.

Given the interest in examining differential experiences for students across age groups, we employed an age-group categorization. Generally, traditional (ages 18-24) and nontraditional (25+) student groups are used in research studies and reports regarding achievement factors in higher education (e.g., Advisory Committee, 2012; Kazis et al., 2007). Guided by the work of Bye and colleagues (2007), we were concerned that this overly broad categorization process clusters together many adults who differ quite significantly from one another regarding their status in life in relation to education and common external factors. The simple traditional and nontraditional orientation may very well mask within-group differences in particular for the oft-used nontraditional category of students aged 25 and older. A pilot study with a previous cohort (Heller & Cassady, 2013) confirmed that identifying three groups allowed for detection of differences that were masked by dichotomous age groupings. As such, for this study we included three groups: The traditional category included students 18-22 years of age; the late starters category consisted of students 23-27 years of age; and the nontraditional group included students aged 28 and older, most of whom had been out of formal education settings for 10 or more years.

Procedures

The participants completed a series of online surveys during the first week of their first semester (prior to any course exposure), with most students completing the items in less than 30 minutes. Participation satisfied a course requirement, but the students were provided with an alternative assignment if they chose not to participate. Course grades and cumulative GPA were obtained at the end of the semester from official school records.

Measures

BARRIERS scale. The BARRIERS scale (see Appendix A) is a newly developed 9-item Likert-type scale that measures the degree to which students believe that
specific personal, familial, and contextual factors will pose challenges to their academic success as a student in college. The items selected for inclusion in the BARRIERS scale were created through collaboration with faculty members and administrators at both two-year and four-year postsecondary institutions with awareness of the typical external barriers to student retention. In addition, review of research on factors that promote risk for program withdrawal were reviewed. Higher values indicate higher levels of perceived risk to success. Cronbach’s alpha for the BARRIERS scores in the present sample indicated sufficient internal consistency (α = .77).

**Motivated Strategies for Learning Questionnaire (MSLQ).** The MSLQ is an 81-item self-report measure soliciting students’ motivation toward academic courses as well as self-regulation and learning strategies employed toward achieving academic goals (Pintrich et al., 1991). Students respond to each item using a 7-point Likert-type scale with the extremes marked by *not at all true of me* and *very true of me*. According to Pintrich et al. (1991, 1993), the established MSLQ measure consistently yields robust reliability coefficients ranging from .52 to .93 for all subscales. The version of the MSLQ used in this study was modified slightly to broaden the focus of student responses from specific (i.e., “In a class like this...”) to general postsecondary condition (i.e., “In college...”). For this study, we investigated four subscales that are used to calculate an overall Resource Management Strategies subscale. The four MSLQ subscales used in this study (Cronbach’s alpha values for current sample in parentheses) were (a) Time and Study Environment (α = .77), (b) Effort Regulation (α = .68), (c) Peer Learning (α = .73), and (d) Help Seeking (α = .56).

**Academic Anxiety Scale.** Academic anxiety is defined as anxiety experienced in response to academic demands and the academic environment (Cassady, 2010) and is measured in this study with the 11-item Academic Anxiety Scale. The Academic Anxiety Scale uses a 4-point Likert-type response format typical to anxiety measures with response options ranging from *not at all typical of me* to *very typical of me* (see Appendix B for items). Cronbach’s alpha for the Academic Anxiety Scale in the present study was .87. Prior research with the Academic Anxiety Scale has confirmed that academic anxiety is a broader construct than test anxiety but is still related to overall negative affective response (Starling, Campbell, Cassady, & Pierson, 2012).

**Achievement measures.** For the purposes of this study, achievement outcomes were measured via cumulative GPA calculated at the conclusion of the students’ first academic semester. Student GPA values were obtained directly from the granting institution after obtaining an informed consent and FERPA waiver for participating students.
Results

Data were initially explored for outliers, skewness, data entry errors, and distributional assumptions. Scores were all within reasonable range, and multivariate normality was assumed to be satisfactory for parametric analyses. For the primary analysis, we conducted a 3 (age levels) x 2 (gender) multivariate analysis of variance (MANOVA) examining main and interaction effects on four dependent variables: perceived impact of barriers, level of academic anxiety, use of resource management strategies, and cumulative GPA (see Table 1 for descriptive statistics). Results revealed a weak but statistically significant multivariate effect of gender on the four variables, $F(1, 699) = 5.38, p < .001, \eta^2 = .03$. Examination of the significant discriminant function analysis ($\lambda = .934, p < .001$) revealed that resource management ($r = .647$), cumulative GPA ($r = .429$), and perceived impact of barriers ($r = .394$) were the best indicators for gender differences. Academic anxiety provided limited explanatory power for distinguishing among males and females ($r = .232$), consistent with the literature on self-reported anxiety among males and females. Review of the group means (see Table 1) indicates that females reported higher levels on all four variables in the study.

Of greater interest, the MANOVA results also revealed a significant age group effect, $F(2, 699) = 10.42, p < .001, \eta^2 = .06$. Discriminant analysis for differences among age groups ($\lambda = .882, p < .001$) demonstrated that the variable of greatest importance was perceived impact of barriers ($r = .720$). In addition, resource management ($r = .484$) and academic anxiety ($r = -.265$) were also significant factors in identifying age differences, with no reliable age group differences in cumulative GPA detected ($r = .025$). As shown in Table 1, late starters reported the highest levels of perceived barriers, followed by the nontraditional and traditional students respectively. Academic anxiety was highest in traditional students and was increasingly lower in the older age categories. In direct contrast, students' resource management strategies were progressively higher across the age groups. Although these differences are not statistically significant after controlling for all the other variables, it is interesting to note that nontraditional learners (who had the lowest academic anxiety and highest resource management skills) also had the highest GPAs.
Table 1
Means and Standard Deviations for Group Comparisons on Cumulative GPA, Perceived Barriers, Academic Anxiety, Resource Management and Resource Management Subscales

<table>
<thead>
<tr>
<th>Variables</th>
<th>Traditional age 18-22</th>
<th>Late starter age 23-27</th>
<th>Nontraditional age 28+</th>
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</thead>
<tbody>
<tr>
<td><strong>Cumulative GPA</strong></td>
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<tr>
<td>Males</td>
<td>2.06 (1.30)</td>
<td>1.87 (1.45)</td>
<td>2.15 (1.45)</td>
</tr>
<tr>
<td>Females</td>
<td>2.39 (1.25)</td>
<td>2.06 (1.49)</td>
<td>2.51 (1.41)</td>
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<tr>
<td><strong>Perceived barriers</strong></td>
<td></td>
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<tr>
<td>Males</td>
<td>14.37 (4.37)</td>
<td>17.20 (4.88)</td>
<td>16.79 (5.17)</td>
</tr>
<tr>
<td>Females</td>
<td>15.29 (5.66)</td>
<td>18.80 (5.07)</td>
<td>18.27 (6.81)</td>
</tr>
<tr>
<td><strong>Academic Anxiety</strong></td>
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<tr>
<td>Males</td>
<td>1.74 (.54)</td>
<td>1.67 (.52)</td>
<td>1.47 (.47)</td>
</tr>
<tr>
<td>Females</td>
<td>1.79 (.56)</td>
<td>1.75 (.59)</td>
<td>1.70 (.54)</td>
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<tr>
<td><strong>Resource management</strong></td>
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<tr>
<td>Males</td>
<td>4.37 (.81)</td>
<td>4.57 (.87)</td>
<td>4.97 (.82)</td>
</tr>
<tr>
<td>Females</td>
<td>4.72 (.78)</td>
<td>4.76 (.74)</td>
<td>4.96 (.63)</td>
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</table>

**Resource management subscales**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Traditional age 18-22</th>
<th>Late starter age 23-27</th>
<th>Nontraditional age 28+</th>
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<tbody>
<tr>
<td><em>Time &amp; study environment</em></td>
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<tr>
<td>Males</td>
<td>4.64 (.92)</td>
<td>4.92 (.96)</td>
<td>5.29 (1.08)</td>
</tr>
<tr>
<td>Females</td>
<td>5.11 (.97)</td>
<td>5.23 (1.00)</td>
<td>5.55 (.83)</td>
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<tr>
<td><em>Effort regulation</em></td>
<td></td>
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<tr>
<td>Males</td>
<td>4.76 (1.06)</td>
<td>5.59 (1.07)</td>
<td>5.69 (.99)</td>
</tr>
<tr>
<td>Females</td>
<td>5.15 (1.13)</td>
<td>5.54 (1.02)</td>
<td>5.73 (.90)</td>
</tr>
<tr>
<td><em>Peer learning</em></td>
<td></td>
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</tr>
<tr>
<td>Males</td>
<td>3.51 (1.43)</td>
<td>3.29 (1.49)</td>
<td>3.54 (1.35)</td>
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<tr>
<td>Females</td>
<td>3.60 (1.43)</td>
<td>3.64 (1.03)</td>
<td>3.39 (1.35)</td>
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<tr>
<td><em>Help seeking</em></td>
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<tr>
<td>Males</td>
<td>4.04 (1.18)</td>
<td>3.91 (1.12)</td>
<td>4.35 (1.22)</td>
</tr>
<tr>
<td>Females</td>
<td>4.34 (1.10)</td>
<td>4.30 (1.17)</td>
<td>4.23 (1.18)</td>
</tr>
</tbody>
</table>

*Note.* Perceived Barriers based upon sum of all factor ratings, values presented range from 9-45 with higher values representing higher perceived risk; Academic Anxiety (AA) means range from 1-4, with higher values representing higher levels of AA; Resource management and subscale means range from 1-7, with higher values representing higher use of strategies; Cumulative GPA reported on a 4.0 grading scale.
Secondary Analysis

A set of more fine-grained exploratory analyses was conducted to explore the specific barriers and resource management strategies that were reported by participants of each gender and age group (see Tables 1 and 2). These analyses build on the primary MANOVA finding reported previously by providing a more direct examination of the unique experiences of students, focusing on the specific variables related to BARRIERS and the resource management constructs in question.

**BARRIERS differences.** First, the MANOVA revealed a significant multivariate effect of age group on the nine individual BARRIERS items, \( F(2, 858) = 6.38, p < .001, \eta^2 = .06 \). Interpretation of the discriminant analysis (\( \lambda = .859, p < .001 \)) revealed that family responsibilities and childcare contributed the most to group differences (\( r = .757, r = .724 \), respectively), while financial barriers (\( r = .533 \)), dependent health (\( r = .437 \)), lack of support system (\( r = .329 \)), and academic difficulties (\( r = .318 \)) also accounted for differences among the three age groups. Transportation problems, work conflict, and personal health did not contribute to observed group differences. Comparisons of mean differences (see Table 2) reveal that the two older age groups reported higher perceived challenges related to all BARRIERS other than transportation, which was similar for all groups. Students in the late-starter group were most likely to perceive barriers in financial issues, dependent health issues, personal health issues, childcare issues, and lack of family support. Students in the nontraditional group reported the highest degree of perceived barriers for family responsibilities, work conflict, and academic difficulties.

There was also a significant multivariate effect of gender on the nine BARRIERS factors \( F(1, 858) = 3.32, p = .001, \eta^2 = .03 \). The discriminant analysis (\( \lambda = .958, p < .001 \)) illustrated that dependent health, childcare, and personal health served as the variables of greatest importance (\( r = .733, r = .656, r = .623 \), respectively), whereas family responsibilities (\( r = .404 \)) and work conflict (\( r = -.274 \)) provided limited explanatory power. Review of the group means illustrates that females were more likely to identify with barriers related to family concerns, whereas males were more likely to identify with work conflicts.

**Resource management differences.** The MANOVA examining subgroup differences in the reported use of resource management strategies revealed a significant multivariate effect of age group on the four MSLQ subscales (i.e., time and study environment, effort regulation, peer learning, help seeking) that contribute to resource management, \( F(2, 812) = 9.70, p < .001, \eta^2 = .05 \). The discriminant analysis (\( \lambda = .910, p = .000 \)) demonstrated that effort regulation (\( r = .979 \)) and time and study environment (\( r = .723 \)) were the primary factors accounting for age group differences in resource management skills. Group comparisons (see Table 1) reveal that nontraditional students reported the highest levels, followed by the late-starter
Table 2  
**Means and Standard Deviations for Group Comparisons on Individual Perceived Barriers**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Traditional age 18-22</th>
<th>Late starter age 23-27</th>
<th>Nontraditional age 28+</th>
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<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
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<tr>
<td><strong>Total barriers</strong></td>
<td>14.37 (4.37)</td>
<td>15.29 (5.66)</td>
<td>17.20 (4.88)</td>
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<tr>
<td><strong>Transportation</strong></td>
<td>1.60 (1.06)</td>
<td>1.62 (1.05)</td>
<td>1.71 (1.07)</td>
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<tr>
<td><strong>Lack of support system</strong></td>
<td>1.46 (.89)</td>
<td>1.50 (.98)</td>
<td>1.81 (1.11)</td>
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<tr>
<td><strong>Family responsibilities</strong></td>
<td>1.93 (1.15)</td>
<td>1.98 (1.22)</td>
<td>2.16 (1.13)</td>
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<tr>
<td><strong>Childcare issues</strong></td>
<td>1.12 (.50)</td>
<td>1.37 (.89)</td>
<td>1.61 (1.05)</td>
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<tr>
<td><strong>Personal health</strong></td>
<td>1.37 (.68)</td>
<td>1.63 (.96)</td>
<td>1.65 (1.05)</td>
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<td><strong>Health of dependent</strong></td>
<td>1.17 (.50)</td>
<td>1.40 (.87)</td>
<td>1.52 (.89)</td>
</tr>
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<td></td>
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<tr>
<td><strong>Financial barriers</strong></td>
<td>2.12 (1.15)</td>
<td>2.19 (1.33)</td>
<td>3.03 (1.33)</td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>Work conflict</strong></td>
<td>1.80 (1.05)</td>
<td>1.68 (1.05)</td>
<td>1.94 (.93)</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td><strong>Academic difficulties</strong></td>
<td>1.87 (.87)</td>
<td>1.88 (1.06)</td>
<td>1.81 (1.01)</td>
</tr>
</tbody>
</table>

*Note.* Barriers reported on a 5-point Likert scale. Total Barriers are sum of all factor ratings; values range from 9-45. Among all values, higher values represent higher perceived risk.
and traditional student groups for both indicators. There was also a significant effect of gender, $F(1, 812) = 4.98, p = .001, \eta^2 = .02$. The discriminant analysis ($\lambda = .952$, $p = .000$) illustrated three of the resource management subscales contributing to the gender difference: time and study environment ($r = .949$), effort regulation ($r = .585$), and help seeking ($r = .414$), with females reporting higher levels for all three factors.

**Discussion**

This study of the beliefs and behaviors of first-time community college students provides a compelling picture of the academic barriers as well as protective resource management strategies that are reported by males and females at different points in their adulthood. Close examination of the differential patterns of perceived stressors as well as students’ tendencies to use effective coping strategies provides insight into (a) challenges that students from diverse backgrounds may face as they enter higher education, and (b) possible areas of particular attention to support specific subgroups of learners.

**Gender Differences**

The results of this study are consistent with most prior research that reports females identifying higher levels of perceived barriers or stressors related to academic success than males (Anderson & Miezitis, 1999; Backels & Meashey, 1997; Stallman, 2010). Although the females reported higher levels of perceived stressors than males (across all age groups), they also maintained higher resource management skills and cumulative GPAs. This pattern suggests that these resource management skills serve as successful coping strategies to overcome the perceived barriers to success.

**Age Group Differences**

The adoption of a more specific age group distinction has also been fruitful for understanding the first-year experiences of community college learners. The authors consistently observed patterns demonstrating differences between the students classified as late starters (ages 23-27) and nontraditional (28 and older), in addition to the standard findings contrasting these students with traditional students. The results demonstrated that late starters and nontraditional students reported higher levels of perceived external barriers (e.g., family and contextual barriers), whereas the traditional students were more likely to cite internalized barriers to success (e.g., academic anxiety).

The most compelling finding for the field is the contrast between the late starters and the nontraditional students. Although perceived barriers were high for both age groups, nontraditional students reported being more knowledgeable and experienced in managing their environments, using support resources more
effectively, and balancing the multiple challenges and stressors they may face—supporting prior research with nontraditional learners (e.g., Blanchard-Fields et al., 2004; Crawford & Channon, 2002; Labouvie-Vief, 2003). The application of these resource management skills was accompanied by higher levels of achievement than shown by the late starters, who faced similar barriers to success. This finding suggests that the nontraditional learners had adaptive coping strategies to manage the multiple expectations and needs in their academic lives (Balduf, 2009; Kitsantas et al., 2008; Preckel et al., 2006; Tuckman, 2003). The steady and enduring application of facilitative resource management strategies is likely bolstered in this age group by the tendency to hold higher levels of academic intrinsic motivation than their younger peers (Bye et al., 2007; De Vito, 2009).

One effect in this study that was not anticipated was that late starters would report significantly less academic anxiety than younger students. This finding provides evidence counter to the common anecdotal concern that students returning to education after a considerable delay will have higher levels of academic anxiety. It is possible that this is an effect specific to the community college population. That is, traditional students at community colleges tend to be less prepared for academic rigor and require remediation, may have been rejected from other institutions with higher standards, and are often first-generation students (Inman & Mayes, 1999; Scherer & Anson, 2014). This combination of personal factors can contribute to greater anxiety toward educational settings. Furthermore, a self-selection bias must be considered when reviewing academic anxiety for the late starters and nontraditional students in this study. Late starters and nontraditional students with high levels of academic anxiety are less likely to enroll in community college programs, whereas traditional-aged community college learners may be more compelled to enroll due to parental influence.

**Implications**

The implications drawn from this study are a heightened need for early assessment and coordinated intervention efforts at both two-year and four-year institutions. Consistent with the work of Bandura (1986, 1997, 1999) and Snow, Corno, and Jackson (1996), it is imperative educational institutions recognize the roles that multiple, interacting factors play in student achievement outcomes, particularly the influence of perceived external barriers and forms of coping. Having a greater understanding of the personal, familial, and contextual barriers that students face at different points in their lifespan—and coping strategies that tend to support overcoming those barriers—can help institutions establish policies and procedures that connect learners with supportive, meaningful resources and training that facilitate success. Unfortunately,
institutions often intervene only after students have experienced hardships or academic failure. Using predictive measures for likely barriers at program enrollment, institutions can connect learners proactively with coping resources that may mitigate the effects of academic challenges (e.g., childcare, transportation, financial aid). When these predictive measures are incorporated into the general assessment framework, the institution learns more about the specific challenges that the students face and can take more preventative measures to ensure learners’ needs are met, leading to greater retention and higher graduation rates.

As shown in this study and prior research, promoting higher resource management skills should translate into higher achievement by mitigating the influence of academic barriers (Balduf, 2009; Kitsantas et al., 2008; Lynch, 2006, 2010; Martin & Marsh, 2008; Pintrich et al., 1993; Preckel et al., 2006; Tuckman, 2003). Providing direct instruction and support for study skills and management of time and environment during institutional orientations and first-semester college preparation courses or within specific courses can promote learners’ ability to identify and manage the stressors (internal and external) that typically impact performance detrimentally (Bliss, et al., 2012; Hofer, Yu, & Pintrich, 1998). To reach the broader college population, institutions can ensure these variables and coping strategies are explicitly addressed within a first-semester Learning to Learn (Hofer, Yu & Pintrich, 1998) or First-Year Experience course format (Bliss et al., 2012).

Another avenue that holds promise for student support is building a community of learners who serve as support resources for one another. Institutions or instructors can facilitate relationship-building among students that can be centered within courses (e.g., supporting understanding of course materials) or on a more general framework, including tutoring and peer learning experiences (Seabi, Cockcroft, & Fridjhon, 2009). Coordination of optimal peer support networks can be fostered through student orientation experiences and can become more focused and adaptive by identifying individuals’ specific needs.

Although these adaptive strategies are generally easy to conceptualize once external barriers are identified, more attention to overcoming internal barriers (e.g., academic anxiety) may still be warranted. Essentially, connecting learners who have identified internal barriers to success with supportive peers, staff, and coping resources should aid learners in managing stressors and developing competence in effective and efficient learning (Weinstein, Meyer, Husman, Van Mater Stone, & McKeachie, 2006). Successfully managing either internal or external barriers should translate into enhanced academic self-efficacy (Chemers, Hu, & Garcia, 2001; Robbins et al., 2004), resulting in greater overall success in the college environment (Robbins, Allen, Casillas, Peterson, & Le, 2006; Van Etten, Pressley, McInerney, & Liem, 2008).
Limitations and Directions for Future Research

As with all research conducted in true educational settings, it is imperative to identify limitations of the study that may influence generalization of the results. First, the data in this study were collected in a Midwestern community college with noncompetitive admissions; as such, the age and gender effects likely do not translate to all postsecondary settings. An imbalance in gender representation and insufficient responses from minority students made it difficult to explore different conditions for learners from underrepresented minority groups. Although that is consistent with the campus in question, it limits the overall utility of the findings in this study in more diverse settings. We also acknowledge that capturing these data in a single semester limits our ability to establish causal relationships related to the efficacy of coping strategies to reduce anxiety or promote academic success.

Despite longstanding efforts, student retention continues to be a concern for institutions of higher education, particularly during the first year. Although this study suggests that resource management skills support success in overcoming external barriers, the application of specific support systems and strategies were not directly evaluated. Longitudinal intervention or observational studies that identify use or efficacy of specific coping strategies or student support programs are necessary next steps in identifying quality support strategies on a broader level. We encourage more work that adopts the framework of student development theory to drive the investigative pathway. This theoretical framework allows us to understand and explain college student change and growth that occurs over time with particular consideration to individual differences (Evans, Forney, Guido, Patton, & Renn, 2009). Future studies that overcome the limitations of a primarily cross-sectional correlational methodology could support the development of this line of inquiry. Specific strategies that show promise for future investigations are examining the influence of advisors and instructors who scaffold student learning, college orientation or study skills courses, collaborative peer groups, and student help centers that provide contact to various support services (e.g., Heller & Marchant, 2015; Berthold, Nückles, & Renkl, 2007; Bliss, Webb, & St. Andre, 2012; McKeachie & Svinicki, 2006; Weinstein et al., 2006).

Conclusion

Overall, the findings of this study highlight multiple factors that play significant roles in student achievement outcomes during the first year of community college. The results emphasize the importance of identifying personal, familial, and contextual challenges that students believe may threaten their academic potential, with particular attention to the distinct nature of these challenges among males and females of differing age groups. The results also demonstrate the essential role
that resource management strategies play as potential explanations for effective coping and greater achievement outcomes. Specifically, the group in greatest need of concerted attention and support in this particular community college were the late-starter females. They demonstrated a profile characterized by high rates of concern over family and contextual barriers (e.g., childcare, family health, finances), low skills in resource management, and moderate levels of academic anxiety. This confluence of high perceived barriers and limited self-regulatory skills to moderate the impact of those barriers on performance places these women at risk for failure. Especially as compared to nontraditional females, the women in the late-starter group appear to suffer from additional contextual barriers but have not yet established the skills that support academic resilience. Our intent is that postsecondary institutions can provide more proactive solutions to support student success as research in this field builds a broader awareness of the individual and contextual factors that affect achievement for first-year students.

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**Reader May Respond:**

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Appendix A

Background and Achievement-Related Risk-factors that Impact the Education and Retention of Students [BARRIERS] Scale

Considering each item below, on a scale of 1-5, with 1 indicating NOT LIKELY and 5 representing VERY LIKELY, indicate the likelihood each factor would pose a challenge to your success as a student at this institution:

1 2 3 4 5
Not likely Somewhat likely Very Likely

Indicate the selected number:

1. Transportation problems
2. Lack of support system
3. Family responsibilities
4. Childcare issues
5. Personal health issues
6. Health issues of a dependent
7. Financial barriers
8. Work conflict
9. Academic difficulties
Appendix B

Academic Anxiety Scale (Cassady, 2010)

Complete the following items using the four-point scale below:
A = Not at all typical of me  
B = Somewhat typical of me  
C = Quite typical of me  
D = Very typical of me

1. I often worry that my best is not as good as expected in school.
2. I tend to put off doing schoolwork because it stresses me.
3. I often worry that I am not doing assignments properly.
4. I am less confident about school than my classmates.
5. I have a sense of dread when I am in my classrooms.
6. I tend to find my instructors intimidating.
7. I spend much of my time at school worrying about what is next.
8. There is something about school that scares me.
9. I’m concerned about what my classmates think about my abilities.
10. I often feel sick when I need to work on a major class assignment.
11. I have a hard time handling school responsibilities