

Predictors of Academic-Related Stress in College Students: An Examination of Coping, Social Support, Parenting, and Anxiety

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This study examined potential predictors of the academic-related stress experienced by college students. In particular, the relationships among the coping strategies used by college students, social support, the parenting style used by college students' mothers and fathers, college students' experience of anxiety, and academic-related stress were examined. Ninety-three undergraduate students enrolled in a psychology course at a large southeastern university completed a series of self-report questionnaires that measured the variables under study. Results suggested that anxiety, problem-focused coping, and support from significant others may serve as potentially important predictors of the academic-related stress experienced by college students. Thus, identifying college students' experience with these variables and addressing these variables in practical settings may help college students alleviate their experience of academic-related stress and have a less stressful, and possibly more fulfilling, college career.

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Although attending college can be a rewarding experience, it also can be a time of considerable anxiety and stress for students (Dyson & Renk, 2006). The combination of the many stressors of college life, such as planning for the future, struggling with exams and assignments, meeting the demands of challenging professors, deciding on a major, and transitioning into financial and emotional independence, can be an overwhelming experience for many students. Further, in addition to these stressors, students may wonder whether they will be able to meet their own expectations as well as those of their parents and friends (Blimling & Miltenberger, 1981).

Given all these factors, students' experience of anxiety and stress during their college years may be important to their overall functioning as well as to their academic performance (Silva, Dorso, Azhar, & Renk, in press). Thus, many variables may be related to the academic-related stress experienced by college students. Further, some of these variables may contribute to decreased levels of academic-related stress. As a result, this study will investigate the relationship among the academic-related stress experienced by college students and several variables that are likely relevant to their lives (i.e., coping strategies employed usually by college students during stressful times, college students' perceived social support, and the parenting style used by the mothers and fathers of college students).

Coping Strategies

For many students, stress can play a major role in the transitional period of attending college for the first time (Dyson & Renk, 2006). Utilizing effective coping strategies can help alleviate the negative effects of stress. For example, a recent study conducted by Park and Adler (2003) with first-year medical students concluded that the more students used coping strategies, the less deterioration they experienced in their physical health due to stress. Before selecting and making attempts to use coping strategies, however, individuals evaluate or appraise the stressor(s) with which they are faced (Lazarus & Folkman, 1984). Although appraisal can be defined as an individual's evaluation of what is at stake and what coping options may be available (Lazarus & Folkman, 1984), coping can be described as the cog-

nitive and behavioral efforts an individual uses to manage specific demands or stressors (e.g., Dressler, 1991). These stressors can be internal and/or external, but they have been appraised as taxing or as exceeding the resources that are available to an individual. Further, coping strategies can be viewed as what an individual actually thinks and does in a particular stressful situation (Folkman & Lazarus, 1980). In general, coping efforts may change constantly for any one individual (Lazarus & Folkman, 1984). When selecting the coping strategies that they will use, college students have many options available to them.

In a seminal work in the stress and coping literature, Lazarus and Folkman (1984) distinguished between two types of coping strategies: problem-focused and emotion-focused. Problem-focused coping strategies tend to be employed when an individual has determined that a harmful, threatening, or challenging situation is amenable to change. Thus, the individual who is experiencing stress perceives the stressful situation to be alterable and within his or her capabilities of control (Lazarus & Folkman, 1984). As a result, these strategies center on managing or altering the situation causing stress (Lazarus & Folkman, 1984; Snyder, 1999). Examples of problem-focused coping might be moving out of a stressful roommate situation or creating a study plan for an upcoming exam. In previous studies, men have been more likely to endorse problem-focused coping strategies (Folkman & Lazarus, 1980), and such strategies have been associated with improvements in functioning (e.g., reduced levels of depression; McNamara, 2000).

In contrast, emotion-focused coping strategies focus on dealing with the negative emotions that are a product of the stressful situation (Lazarus & Folkman, 1984; Snyder, 1999). When the individual who is experiencing stress perceives the stressful situation to be outside of his or her control, emotion-focused coping strategies may be employed. In other words, these types of strategies are used when an individual has judged that nothing can be done to modify a harmful, threatening, or challenging environment (Lazarus & Folkman, 1984). These types of coping strategies may include avoidance, denial, wishful thinking, or seeking emotional support and may be used to maintain hope, deny the implications of the stressor, or act as if the stressor did not matter (Lazarus & Folkman, 1984). Specific examples of

these types of strategies may include ignoring an obnoxious roommate, regulating emotions while studying for an exam, or talking to family members during a particular crisis. In previous studies, women have been more likely to endorse emotion-focused coping strategies (Folkman & Lazarus, 1980), and such strategies have been associated with maladaptive functioning and strain (Terry, 1991).

Roth and Cohen (1986) describe an additional dichotomy involving two basic modes of coping strategies that orient an individual's cognitive and emotional activity either toward or away from the stressful situation. The first mode, approach strategies, allows an individual to take appropriate action or to notice and take advantage of changes that may make a stressful situation more controllable (Roth & Cohen, 1986). Similar to the problem-focused coping strategies described above, this mode of coping is particularly helpful when there is a possibility of affecting the nature of the stressful situation. Further, an approach orientation can result in a fuller experience and expression of emotional distress (Roth & Cohen, 1986). Although an approach orientation can be effective in coping with a controllable stressor, there are potential costs if the stressor experienced proves to be uncontrollable. In such a case, approach strategies may lead to increased distress and worrying, which may prove to be time consuming and nonproductive (Roth & Cohen, 1986).

The second mode, avoidance, tends to reduce stress over short periods of time as well as prevent anxiety from becoming crippling when confronting uncontrollable stressors. In addition, avoidance allows for gradual recognition of a threat. Increased hope and courage are possibilities when avoidance strategies are used in a partial, tentative, or minimal manner. Further, these positive consequences may work to facilitate the use of the approach mode in the future (Roth et al., 1986). Although avoidant strategies may be helpful in providing time to garner personal resources in the initial phases of coping (Holahan & Moos, 1987), they also may interfere with appropriate actions that could affect the nature of the stressful situation and may result in emotional numbness, unwanted intrusions of threatening material, and disruptive avoidance behaviors (Roth & Cohen, 1986). Last, if used over a lengthy period of time, psychological dysfunction may occur as a result of failing to confront a crisis directly (Holahan & Moos, 1987). An abundance of literature exists that has examined the relationship

among these differing coping strategies and stress management. Although some individuals may have a strong preference to use one particular coping strategy, different coping strategies are generally not mutually exclusive. Thus, most individuals tend to use different types of strategies so that the selected strategies coincide with the situational context in which the individuals find themselves and with their view of the situational context (Roth & Cohen, 1986). Further, different types of coping strategies may be advantageous depending on the specific situations to which they are applied (Compas, Worsham, Ey, & Howell, 1996; Hart, Wearing, & Headey, 1995; Park & Adler, 2003; Seltzer, Greenberg, & Krauss, 1995; Weisenberg, Schwarzwald, Waysman, & Solomon, 1993).

For example, in Park and Adler's (2003) study that examined the relationship between both problem-focused and emotion-focused strategies and the well-being of first-year medical students, the use of emotion-focused coping strategies, particularly escape avoidance, was related to lower levels of psychological well-being. On the other hand, problem-focused strategies, particularly planful problem solving, were related to higher levels of psychological well-being among these students (Park & Adler, 2003). Other studies also have reported that individuals who have employed emotion-focused strategies during distressing situations experienced increased anxiety (Liverant, Hofmann, & Litz 2004; Lobel, Gilat, & Endler 1993). With regard to academic functioning specifically, some studies have found a relationship between coping and college achievement (Brown & Cross, 1997; DeBerard, Spielmans, & Julka, 2004), whereas other studies have not found such a relationship (Ryland, Riordan, & Brack, 1994). Given these findings, the coping strategies used by college students still may prove to be an important variable in predicting their perceived levels of academic-related stress. In particular, the types of coping strategies used by college students may contribute to either an increase or a decrease in their academic-related stress.

Social Support

During times of stress, many college students may seek social and emotional support from their family and friends. Social support, or receiving emotional, informational, and/or tangible support from

other individuals (Lazarus & Folkman, 1984), has been linked positively with the maintenance of physical health during stressful situations. In addition, the perceived availability of social support, rather than the actual use of social support, may actually be more important in protecting individuals from the harmful effects of stressful situations (Holahan & Moos, 1987). Further, social support may be an important component of college students' transitioning successfully to the college environment (Hays & Oxley, 1986) and college students' academic achievement (DeBerard et al., 2004), with low levels of social support being related to a lack of persistence in academic endeavors (Mallinckrodt, 1988).

Given these findings, it is possible that support from family and friends is extremely important in the lives of college students during their college careers, particularly as they experience and make attempts to cope with academic-related stress. For example, one study using a sample of first- and second-year college students, most of whom were without daily parental contact, showed that parental support predicted significantly the grade point average (GPA) of these students. In contrast, support from friends and romantic partners did not predict GPA significantly (Cutrona et al., 1994). These results indicated that, although parents may be removed physically from college students' daily life, they still may have a major impact on college students' academic performance. As a result, the perceived level of emotional support from college students' parents may be related greatly to many aspects of their college career, including their academic performance and their experience of academic-related stress. Thus, social support may be an important contributor to the academic-related stress that is experienced by college students.

Parenting Styles

In addition to the current relationships between college students and their parents, early parent-child interactions may influence the way in which college students respond currently to academic-related stress. Seminal attachment theories developed by Bowlby (1969) and Ainsworth and Bell (1970) have described how the relationship between an infant and his or her primary caregiver may be influential throughout life. Further, researchers are studying the relationship

between attachments in childhood and coping styles in adulthood (Cutrona et al., 1994). These research inquiries indicated that there may be a long-lasting effect of the early interactions that occur between parents and their children on the later functioning of adult children. Thus, the manner in which mothers and fathers parent their children may be an important component in the overall and academic functioning of college students.

Certainly, parenting styles have been shown to play an important role in the parent-child relationship. One of the most widely used categorizations of parenting styles is that proposed by Baumrind (1971). Baumrind (1971) suggested that there are three main parenting styles: permissive, authoritarian, and authoritative. According to this model, permissive parents tend to make fewer demands on their children, allowing them to regulate their own activities as much as possible. Permissive parents also exert little control over their children and use minimal forms of punishment, if any at all. On the other end of the spectrum lie the authoritarian parents, who are very demanding and highly directive with their children. They expect unquestioning obedience from their children, while providing little warmth and being more detached than other parents. Generally, authoritarian parents favor strict disciplinary measures over discussions to control their children's behavior. Authoritative parents fall somewhere between these two extremes. They are firm and directive toward their children while still allowing room for warmth and support. Their disciplinary actions are based on reason, discussion, and flexibility (Baumrind, 1971).

A number of studies have suggested that there is a relationship between parenting styles during childhood and a number of different factors related to college students' functioning, including depression, self-esteem, self-perception, self-actualization, levels of perfectionism, and performance goals during college (Dominguez & Carton, 1997; Flett, Hewitt, & Singer, 1995; Gonzalez, Greenwood, & WenHsu, 2001; Klein, O'Bryant, & Hopkins, 1996; Oliver & Berger, 1992; Renk, Klein, & Rojas, 2005; Silva et al., In press). Although the parenting styles experienced by college students during their childhood may be important in their experience of academic-related stress, few studies have examined the relationship between these variables thus far. One such study conducted by Pettit, Bates, and Dodge (1997) sug-

gested that there was a relationship between perceived parental discipline styles and academic performance of children later in their lives. Further, Spera (2005) suggested that the authoritative parenting style is related to higher levels of academic achievement. Given the potential importance of this relationship, the manner in which parenting style is associated with academic-related stress deserves further study.

Academic-Related Stress

Academic pressure is a significant source of stress for many college students (Hashim, 2003; Olpin, 1997; Tyrrell, 1992). Identified sources of academic-related stress have included fear of falling behind with coursework, finding the motivation to study, time pressures, financial worries, and concern about academic ability (Tyrrell, 1992). Additionally, students report stress over struggling to meet academic standards, time management worries, and concerns over grades (Olpin, 1997). Additionally, these sources may exist easily throughout the span of college students' academic careers and may result in college students' experiencing a great deal of stress during their college career. If prevention efforts are to be developed to assist students in dealing with and avoiding academic-related stress, a greater understanding of the relationships among college students' use of coping strategies, social support, experiences of being parented, and academic-related stress needs to be gained.

The Current Study

It is clear that academic-related stress does impact the lives of many college students and that many factors play a role in college students' overall functioning and experience of academic-related stress. As mentioned previously, the current study seeks to examine the relationships among the coping strategies used by college students, social support, the parenting styles used by mothers and fathers, and academic-related stress in college students. Further, this study seeks to determine which variables are related to decreased levels of academic-related stress and, as a result, may be beneficial to college students. Based on the aforementioned literature, it was hypothesized that problem-focused strategies would correlate with lower amounts of academic-related stress. Also, a strong relationship between positive parental

support and lowered levels of academic-related stress was predicted. Further, it was predicted that an authoritative parenting style would correlate with reports of lower academic-related stress. Finally, it was expected that the coping strategies used by college students, as well as the perceived support provided by mothers and fathers and the parenting styles experienced by college students, would be significant predictors of college students' experience of academic-related stress.

Method

Participants

A power analysis (Cohen, 1992) suggested that approximately 107 participants would be needed to detect a medium effect with regression analyses using eight variables (the largest analysis conducted as part of this study) and an alpha level of .05. (It should be noted that mean differences would need approximately 64 participants, correlational analyses would need approximately 85 participants, and a regression with five variables would need approximately 91 participants.) Thus, the sample consisted of 93 undergraduate students enrolled in a psychology course at a large southeastern university. Participants ranged in age from 19 to 25 years, with a mean age of 20.63 years ($SD = 1.32$). The majority of the participants were female (75.3%), whereas 24.7% were male. The majority of the sample was caucasian (72.0%). The remainder of the sample varied in ethnicity (6.5% were Hispanic American, 2.2% were African American, 1.1% were Asian American, and 17.2% reported some other ethnicity). Class standing varied among the sample as well (32.2% were seniors, 44.1% of the participants were juniors, 21.5% were sophomores, 1.1% were freshman, and 1.1% were nondegree seeking).

The majority of the sample was single (92.5%), whereas the remainder of the sample varied in their relationship status (5.4% reported that they were living with a partner, 1.1% reported that they were married, and 1.1% reported some other status). The majority of the sample reported having no children (98.9%), whereas 1.1% reported having children. The majority of the sample also reported that they did not live with their parents (88.2%), whereas the remainder reported that they lived with their parents (11.8%). The manner in which participants handled their living expenses also varied (39.8% of the

participants reported that their parents paid for their living expenses, 33.3% reported that their parents paid partially for their living expenses, 12.9% reported that they paid for their own living expenses, and 14.0% did not report this information).

Information on the amount of parental contact also was collected from participants. Many of the participants reported having contact with their mother at least once a day (39.8%). The remainder of the sample varied in their contact with their mother (34.4% had contact with their mother less often than once a day but at least once a week, 16.1% had contact less often than once a week but at least once every two weeks, 7.5% had contact less often than every two weeks but at least once a month, and 2.2% had contact less than once a month). The majority of the participants (92.5%) reported that the individual that they considered to be their mother was their biological mother. The sample varied in the amount of contact that they had with their father (25.8% reported having contact at least once a day, 30.1% reported having contact with their father less often than once a day but at least twice a week, 20.4% had contact less often than once a week but at least once every two weeks, 12.9% had contact less often than every two weeks but at least once a month, 4.3% had contact less often than once a month, and 6.5% reported having no contact with their fathers). The majority of the participants (89.2%) reported that the individual that they considered to be their father was their biological father.

Measures

Academic-Related Stress

To assess college students' current, overall level of academic-related stress, students were asked to complete the Academic Stress Scale (Kohn & Frazer, 1986). Participants were asked to rate 33 different stressful situations (e.g., examinations, excessive homework, class speaking, crowded classrooms, learning new skills) on a 5-point scale ranging from 1 (*not at all stressful*) to 5 (*extremely stressful*). Two items were deleted inadvertently from the original scale (hot classrooms and cold classrooms). Scores were obtained by taking the sum of the reported scores given to each of the items. Previous research has demonstrated that the Academic Stress Scale has satisfactory internal

consistency as measured by Cronbach's alpha and split-half reliability (.92 and .86, respectively; Kohn & Frazer, 1986). In this study, the total Academic Stress score had acceptable internal consistency (.90).

Coping Strategies

To assess the different ways college students respond to stress, the COPE Scales (Carver, Scheier, & Weintraub, 1989) were used. Five subscales were used to measure aspects of problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support); five subscales were used to measure aspects of emotion-focused coping (seeking of emotional social support, positive reinterpretation, acceptance, ventilation, turning to religion); and four subscales were used to measure aspects of avoidance coping (behavioral disengagement, mental disengagement, alcohol-drug disengagement, use of humor). For each of the 60 items, participants were asked to rank on a scale of 1 (*I don't do this at all*) to 4 (*I do this a lot*) how often they engage in that particular item. Scores were obtained for problem-focused coping, emotion-focused coping, and avoidance coping by finding the sum of the items for each subscale and then summing the respective subscales for each type of coping. According to previous research reports, each of the subscales of the COPE Scales have satisfactory internal consistency as measured by Cronbach's alpha (ranging from .62 to .92), with the exception of mental disengagement (.45; Carver et al., 1989). In this study, problem-focused coping (.86), emotion-focused coping (.81), and avoidant coping (.85) had acceptable internal consistency.

Parental and Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1998) was used to assess college students' level of perceived parental and social support. The MSPSS consists of 12 items that use a 7-point rating scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). This measure includes three subscales (of four items each) addressing three different sources of support: family, friends, and significant other. Each subscale has been shown to have good internal reliability as measured by Cronbach's alpha (.97, .85, and .91, respectively). The reliability of the total scale was .88 in a previous study (Zimet et al., 1998). Additionally, each subscale and the total scale have been shown to have adequate test-retest reliability (.85, .75, .72, and .85, respectively; Zimet et al.,

1998). In this study, the Family (.91), Friends (.95), and Significant Other (.95) subscales had acceptable internal consistency.

The Young Adult Social Support Index (YASSI; McCubbin, Patterson, & Grochowski, 1996) was used as an additional measure of college students' perceived parental and social support. The YASSI contains 60 items used to measure sources of social support for entry-level college freshmen. It includes several subscales: parents, siblings, spiritual faith, college friends, special groups, co-workers, church/synagogue groups, college faculty, counselors, administrators, reading books, watching TV, listening to music, high school friends, other professionals or service providers, and other relatives. Participants are asked to indicate how much support they receive from each of these sources by checking a box for *No*, *Yes*, or *Yes a Lot*. A separate score was derived for each subscale by adding their respective items together. The YASSI has demonstrated adequate internal reliability and test-retest reliability with Cronbach alpha scores of .89 and .90, respectively (McCubbin et al., 1996). In this study, only the parents, siblings, and college friends subscales were used. These scores had acceptable internal consistency (parents: .83, siblings: .81, college friends: .82).

Parenting Styles

To assess the parenting styles experienced by college students, the Parental Authority Questionnaire (PAQ) was administered. This measure contains 30 items designed to measure the permissiveness, authoritarianism, and authoritativeness of parents as appraised by their son or daughter. College students completed the measure regarding both their mothers and their fathers. Participants rated the 60 items on a 5-point scale (1 = *Strongly Disagree* through 5 = *Strongly Agree*). Scores for each subscale were calculated as the sum of their respective 10 items. The PAQ has been shown to be a psychometrically sound and valid measure based on a study on test-retest reliability, internal consistency reliability, and various validity testing (Buri, 1991). In this study, the Permissiveness, Authoritarianism, and Authoritativeness subscale had acceptable internal consistency for mothers (.71, .87, and .86, respectively) and for fathers (.81, .87, and .90, respectively).

Anxiety

Students completed the Manifest Anxiety Scale (MAS) to assess their

level of anxiety. The MAS is a 50-item questionnaire in which participants respond to each item by circling T (*True of you*) or F (*Not true of you*). The Total Anxiety score was calculated from the number of "True" responses to the anxiety items. The MAS has been shown in several studies to have adequate test-retest reliability (Taylor, 1953). In this study, the Total Anxiety score had acceptable internal consistency (.74).

Procedure

Questionnaires including all of the previously described measures as well as a demographics sheet were given to college students in a large undergraduate psychology course at a southeastern university. The participants were allotted the first 30 minutes of class to complete their questionnaires. Before completing the questionnaires, participants were asked to read and sign a consent form that discussed the study as well as its risks and benefits. Participants were ensured anonymity in their responses. Participation was voluntary, and college students were offered extra credit toward the course for their participation. Upon completion of the questionnaire, participants were given a debriefing sheet, which included a description of the purpose of the study, contact information for the faculty author, and references for information on the variables of interest.

Results

Differences Between Male and Female Students

Before conducting other analyses, differences between male and female students were examined on all the variables examined in this study (given the documented sex differences in coping). See Table 1 for these analyses. Male and female college students were not experiencing significantly different levels of academic-related stress, $t(df = 91) = -1.72, p < .09$. With regard to coping strategies, male and female college students did not endorse significantly different levels of problem-focused, $t(df = 91) = -1.34, p < .18$, or avoidant, $t(df = 91) = .16, p < .88$, coping strategies. In contrast, female college students endorsed significantly higher levels of emotion-focused coping strategies, $t(df = 91) = -2.31, p < .02$. Female college students also endorsed significantly greater levels of anxiety than male college students, $t(df = 85) = -2.28, p < .03$.

Table 1
Differences Between Male and Female College Students

Variables	Males		Females		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Academic-Related	96.48	21.67	104.39	18.18	-1.72	.09
Problem-Focused	50.96	8.25	53.81	8.99	-1.34	.18
Emotion-Focused	49.48	7.60	54.71	10.03	-2.29	.02
Avoidant Coping	49.43	8.71	49.09	9.39	.16	.88
Anxiety	29.90	8.74	35.47	10.03	-2.28	.03
MSPSS Significant	4.79	1.43	5.67	1.33	-2.68	.009
MSPSS Family	5.22	1.10	5.63	1.12	-1.50	.14
MSPSS Friends	5.20	1.04	5.66	1.14	-1.73	.09
YASSI Parent	11.91	2.63	13.01	2.10	-2.05	.04
YASSI Sibling	10.43	3.50	11.80	2.61	-1.98	.05
YASSI College	10.26	2.58	11.67	2.64	-2.24	.03
Mother Permissiveness	26.39	5.25	22.04	6.10	3.06	.003
Father Permissiveness	26.50	6.34	21.81	7.31	2.70	.008
Mother	29.35	6.35	31.34	8.62	-1.02	.31
Father Authoritarianess	33.59	5.94	34.09	8.75	-.25	.80
Mother	33.91	7.22	34.24	7.89	-.18	.86
Father	33.55	8.08	31.25	8.75	1.09	.28

On the MSPSS, female college students indicated that they were receiving significantly greater levels of social support from their significant others relative to male college students, $t(df = 90) = -2.68, p < .009$. In contrast, male and female college students did not have any significant differences in the social support that they received from family members, $t(df = 90) = -1.50, p < .14$, or friends, $t(df = 90) = -1.73, p < .09$. On the YASSI, female college students indicated that they were receiving significantly greater levels of social support from their parents, $t(df = 91) = -2.05, p < .04$, siblings, $t(df = 90) = -1.98, p < .05$, and college friends, $t(df = 91) = -2.24, p < .03$, relative to male college students.

With regard to the style of parenting experienced, male college students indicated that they experienced more permissive parenting from their mothers, $t(df = 91) = 3.06, p < .003$, and fathers, $t(df = 87) = 2.70, p < .008$, relative to female college students. There were no differences in the authoritarian parenting received from mothers, $t(df =$

91) = -1.02, $p < .31$, and fathers, $t(df = 87) = -.25$, $p < .80$, or in the authoritative parenting received from mothers, $t(df = 91) = -.18$, $p < .86$, and fathers, $t(df = 87) = 1.09$, $p < .28$.

Relationships Among Variables

To examine the relationships among the variables in the study, correlational analyses were conducted. Because of the differences noted above, correlations are provided for male and female college students separately. These correlations can be found in Table 2, after which select relationships are discussed.

The academic-related stress experienced by male and female college students was not related significantly to problem-focused, emotion-focused, or avoidant coping. Academic-related stress was related significantly to anxiety for both male and female college students, however. In contrast, the academic-related stress of male and female college students was not related significantly to their ratings of any of their sources of social support. Finally, for male college students, academic-related stress was not related significantly to their mothers' or fathers' parenting styles. For female college students, however, academic-related stress was related significantly to the authoritarian style used by their fathers during their childhood, but not to any of the other parenting styles of their mothers or fathers.

Beyond these relationships noted for academic-related stress, several other relationships are noteworthy. For male college students, problem-focused coping was related significantly and positively to the social support received from parents, siblings, and college friends, whereas emotion-focused coping was related significantly and positively to the social support received from siblings and college friends. Avoidant coping also was related significantly and positively to social support received from college friends. For female college students, problem-focused coping was related significantly and positively to the social support received from significant others and family members, whereas emotion-focused coping was related significantly and positively to the social support received from significant others, family members, and friends.

Table 2
Correlations Among Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.Acad. Stress	-	.31	.26	.25	.52	.36	.21	.05	.19	.15	.11	-.27	-.31	-.15	.11	.29	.01
2.Problem Focus	.18	-	.61	.53	.40	.27	.33	.34	.46	.76	.53	.04	.02	.17	-.06	.31	.46
3.Emot. Focus	.09	.69	-	.50	.44	.18	.21	.22	.11	.61	.44	.39	.36	.08	.11	.36	.09
4.Avoidant	.04	.20	.35	-	.23	.28	.32	-.01	.33	.67	.20	.21	.15	.10	.18	.37	-.14
5.Anxiety	.33	-.30	-.10	.16	-	-.29	-.25	-.33	-.17	.17	.21	-.01	.22	-.07	-.03	.09	.20
6.MSPSSSig.Oth.	.15	.50	.41	-.15	-.27	-	.56	.55	.48	.13	.36	-.02	.00	.15	.17	.30	.15
7.MSPSS Family	.14	.36	.31	-.23	-.20	.72	-	.31	.57	.32	.21	-.04	-.36	-.27	.06	.44	-.02
8.MSPSS Friends	.11	.22	.29	-.04	-.15	.69	.55	-	.57	.24	.75	.15	.22	.29	-.41	.27	.58
9.YASSI Parent	-.15	.15	.09	-.11	-.15	.40	.61	.48	-	.49	.52	.12	.08	.09	-.19	.57	.39
10.YASSI Sibling	.01	.14	.13	-.07	-.18	.26	.39	.38	.54	-	.48	.15	.07	.11	.02	.41	.19
11.YASSI College	-.03	.03	.09	.03	-.07	.47	.39	.62	.46	.51	-	.46	.48	.15	-.34	.40	.51
12.M.Permisive	.12	-.00	-.06	.20	.07	-.29	-.24	-.22	-.09	-.01	-.05	-	.72	-.06	-.07	.24	-.11
13.F.Permisive	-.18	.20	.26	.09	-.16	-.11	-.21	-.18	-.19	-.22	-.25	.36	-	.18	-.29	.08	.26
14.M.Authoritar.	.05	.12	.11	-.03	.09	-.01	-.07	-.13	-.30	-.22	-.39	-.30	.11	-	.13	.10	.44
15.F.Authoritar.	.31	-.04	.09	-.10	.30	.15	.10	.09	-.12	-.03	.04	-.14	-.27	.30	-	.49	-.42
16.M.Authoritat.	.04	.27	.06	.05	-.28	.21	.35	.07	.23	.23	.27	.20	-.16	-.25	.07	-	.09
17.F.Authoritat.	-.06	.51	.39	.05	-.29	.23	.21	.12	.22	.14	-.05	.03	.26	.08	-.15	.21	-

Note. Correlations for female college students are below the diagonal, whereas those for male college students are above the diagonal. Significant correlations are in bold.

For male college students, emotion-focused coping was related significantly and positively to their report of anxiety, whereas problem-focused and avoidant coping were not related to their report of anxiety. In contrast, for female college students, problem-focused coping was related significantly and negatively to their report of anxiety, whereas emotion-focused and avoidant coping were not related to their report of anxiety. Also with regard to anxiety, the parenting styles reported for mothers and fathers were not related significantly to the anxiety experienced by male college students. In contrast, having fathers who were low in authoritarianism, mothers who were high in authoritativeness, and fathers who were high in authoritativeness were related to reports of lower anxiety for female college students.

Predicting Academic-Related Stress

Coping Strategies

To examine the predictive value of coping strategies for academic-related stress, a hierarchical regression analysis was conducted. Because of the sex differences noted above, sex was entered in the first step. Because anxiety may be related to both coping strategies and academic-related stress, anxiety was entered in the second step. Finally, problem-focused coping, emotion-focused coping, and avoidance coping strategies were entered in the third step. The results can be found in Table 3. For this analysis, step one was not significant, $F(1, 85) = 2.74, p < .10$. In contrast, step two was significant, $F(2, 84) = 8.37, p < .001$, with anxiety serving as a significant predictor ($p < .001$). Finally, step three was significant, $F(5, 81) = 6.18, p < .001$, with both anxiety ($p < .001$) and problem-focused coping strategies ($p < .002$) serving as significant predictors.

Social Support

To examine the predictive value of social support for academic-related stress, a hierarchical regression analysis was conducted. Because of the sex differences noted above, sex was entered in the first step. Because anxiety may be related to both social support and academic-related stress, anxiety was entered in the second step. Finally, college students' ratings for different sources of social support were entered in the third step. The results can be found in Table 4. For this analysis, step one was not significant, $F(1, 84) = 2.64, p < .11$. In contrast, step two was

Table 3
Predicting Academic-Related Stress from Coping Strategies

Step/Variables	B	β	t	p
<i>Step 1. F (1, 85) = 2.74, p < .10, r² = .03</i>				
Gender	7.98	.18	1.66	.10
<i>Step 2. F (2, 84) = 8.37, p < .001, r² = .17</i>				
Gender	3.88	.09	.84	.41
Anxiety	.74	.38	3.69	.001
<i>Step 3. F (5, 81) = 6.18, p < .001, r² = .28</i>				
Gender	2.53	.06	.56	.58
Anxiety	.91	.47	4.58	.001
Problem-Focused	.94	.43	3.25	.002
Emotion-Focused	-.29	-.14	-1.06	.29
Avoidant	-.18	-.08	-.79	.43

Table 4
Predicting Academic-Related Stress from Social Support

Step/Variables	B	β	t	p
<i>Step 1. F (1, 84) = 2.64, p < .11, r² = .03</i>				
Gender	7.88	.17	1.62	.11
<i>Step 2. F (2, 83) = 8.37, p < .001, r² = .17</i>				
Gender	3.68	.08	.79	.43
Anxiety	.74	.38	3.70	.001
<i>Step 3. F (8, 77) = 4.04, p < .001, r² = .30</i>				
Gender	.14	.00	.03	.98
Anxiety	.94	.48	4.65	.001
Significant Other	4.92	.34	2.19	.03
Family	.92	.05	.35	.73
Friends	1.56	.09	.57	.57
Parent	-1.62	-.19	-1.37	.17
Sibling	1.11	.17	1.35	.18
College Friends	-1.50	-.20	-1.43	.16

significant, $F(2, 83) = 8.37, p < .001$, with anxiety serving as a significant predictor ($p < .001$). Finally, step three was significant, $F(8, 77) = 4.04, p < .001$, with both anxiety ($p < .001$) and ratings of support from significant others ($p < .03$) serving as significant predictors.

Parenting Style

To examine the predictive value of the parenting styles experienced by college students for academic-related stress, a hierarchical regression analysis was conducted. Because of the sex differences noted above, sex was entered in the first step. Because the parenting styles experienced by college students may be related to both anxiety and academic-related stress, the parenting styles of mothers and fathers were entered in the second step. Finally, anxiety was entered in the third step. The results can be found in Table 5. For this analysis, step one was not significant, $F(1, 82) = 3.04, p < .09$. In addition, step two was not significant, $F(7, 76) = 1.64, p < .14$. Finally, step three was significant, $F(8, 75) = 2.51, p < .02$, with anxiety ($p < .007$) serving as a significant predictor.

Table 5
Predicting Academic-Related Stress from Parenting Styles

Step/Variables	B	β	t	p
<i>Step 1.</i> $F(1, 82) = 3.04, p < .09, r^2 = .04$				
Gender	8.29	.19	1.74	.09
<i>Step 2.</i> $F(7, 76) = 1.64, p < .14, r^2 = .14$				
Gender	6.86	.16	1.36	.18
M. Permissive	.10	.03	.24	.81
M. Authoritarian	-.19	-.08	-.61	.55
M. Authoritative	.10	.04	.33	.74
F. Permissive	-.43	-.17	-1.14	.26
F. Authoritarian	.55	.23	1.92	.06
F. Authoritative	.16	.07	.59	.56
<i>Step 3.</i> $F(8, 75) = 2.51, p < .02, r^2 = .21$				
Gender	3.35	.08	.67	.51
M. Permissive	.00	-.01	-.07	.95
M. Authoritarian	-.16	-.07	-.54	.59
M. Authoritative	.28	.11	.92	.36
F. Permissive	-.37	-.14	-1.02	.31
F. Authoritarian	.35	.15	1.23	.22
F. Authoritative	.22	.10	.84	.40
Anxiety	.61	.31	2.76	.007

Discussion

The results of this study suggested that a number of variables are related to college students' experience of academic-related stress, specifically the manner in which students cope with their stress, the types of social support they seek out, and the parenting styles of their parents. All may play a role in the amount of academic-related stress that college students experience during their college years. As a result, future studies may want to consider targeting these variables in programs meant to alleviate the experience of academic-related stress in college students.

Of the three coping strategies under study, only problem-focused coping was a significant predictor of academic-related stress levels in college students, as was hypothesized originally. It was hypothesized that, as more problem-focused strategies were employed, academic-related stress levels would decrease. Similar to the findings of previous studies (e.g., Park & Adler, 2003), problem-focused coping was a significant predictor of academic-related stress. Given these findings, it may be that college students use problem-focused coping strategies more frequently when academic-related stress is increasing. This finding suggested that college students find problem-focused coping strategies are more effective when it comes to dealing with academic-related stress. Further examination should be done of this possible relationship between academic-related stress and problem-focused coping strategies.

Results of this study also suggested that the types of social support that college students receive were related to their levels of academic-related stress. In contrast to findings from previous studies (e.g., Cutrona et al., 1994), parental support was not a predictor of college students' levels of academic-related stress. These findings may be due to the fact that parents are serving a more indirect support role in college students' daily lives. For example, although the majority of college students in this sample did not live with their parents, they reported that they had frequent contact with their mothers and fathers. Thus, college students may have less physical contact with their parents and may have achieved a more autonomous level of functioning; however, college students still may be calling on their parents to provide social support by sharing daily events over tele-

phone or e-mail. Another explanation might be that support from parents in this sample of college students is so consistent over time that it remains the same despite college students' fluctuating levels of academic-related stress.

Although parental support was not related significantly to college students' academic-related stress, social support provided by significant others was a significant predictor of the academic-related stress levels experienced by college students. Results suggested that college students' levels of academic-related stress and the levels of support received from significant others were related positively. This finding may suggest that college students' are seeking (or significant others are providing) more social support as their levels of academic-related stress are increasing. It may be the case that college students' significant others are so in tune to their partners, that they are already offering more support when it is most needed. Further, boyfriends and girlfriends may be more likely to be an immediate influence (and to have a direct physical presence) in college students' daily lives relative to parents and, thus, be able to supply more immediate social support. Additionally, many of these students are transitioning into adulthood, and they may be experiencing their first serious romantic relationship. Thus, they may become more entrenched with their significant other than they otherwise would. This assumption draws attention to the idea that it might be beneficial for students to draw support from several sources rather than just relying on one.

The results of this study also suggested that a relationship exists between the parenting style experienced during childhood and college students' current academic-related stress levels. In particular, academic-related stress was related significantly to the authoritarian style used by the fathers of female college students, with higher levels of authoritarian characteristics being related to higher levels of academic-related stress. Although fathers' parenting styles were related significantly to female college students' levels of academic-related stress, characteristics of mothers' parenting styles did not predict male or female college students' academic-related stress. As authoritarian parents are strict in the demands that they place on their children (Baumrind, 1971), it may be the case that fathers who exhibit authoritarian characteristics are more demanding of their college students with regard to

their academic performance, thus promoting more academic-related stress for these students.

Throughout the examination of these relationships, college students' general experience of anxiety was related to and was a significant predictor of their academic-related stress. It may be the case that college students who are experiencing anxiety are more prone to academic-related stress due to a general experience of negative affectivity (Watson, Clark, & Tellegen, 1988). Further, it may be the case that this general experience of anxiety also is related closely to college students' choice of coping strategies, use of social support resources, and the parenting styles that these students experienced from their mothers and fathers. This hypothesis appeared to be supported by the correlational analyses completed for this study, which demonstrated that college students' report of anxiety is related significantly to their academic-related stress, use of problem-focused coping strategies (for female college students) and emotion-focused coping strategies (for male college students), and to parenting styles experienced by female college students. The relationship between a general experience of anxiety and academic-related stress should be examined further.

Limitations to this study did exist. Data were collected in an upper-level course, and, thus, the majority of the sample consisted of college students who were of junior or senior class standing. As a result, the sample examined in this study may not be representative of most college students. Results may have differed if the sample included a more equal distribution of students across class standings and ages. Additionally, the results were based on self-report measures that relied on participants' subjective responses and an assumption that the participants answered truthfully. Thus, the results reported here may be biased by participants' own desire to portray themselves favorably with regard to the variables examined in this study. Finally, fewer male college students participated in this study than female college students. As a result, sex differences on the variables examined in this study could not be examined in more than a cursory manner.

Implications for Further Research

The results of the study have many implications toward both future research and practical applications. Future studies may examine more

closely the relationship between parenting styles and college students' academic-related stress, particularly with regard to why fathers' styles of parenting may have a relationship to college students' functioning whereas mothers' styles did not. Furthermore, college students' current involvement in a serious, romantic relationship was not assessed in the current study. Future studies might look at how this variable might influence the sources of support that students rely on. Additionally, the results regarding coping strategies and academic-related stress could be extremely helpful in assisting college students in achieving a fulfilling academic experience. For example, university counseling centers can focus on problem-oriented coping methods and social support from individuals in the immediate surroundings as possible ways to address difficulties to academic-related stress. This information could be provided in workshops designed to help students cope with academic-related stress.

Conclusion

The present study provides an empirical perspective on the many factors that may be related to college student's functioning during his or her academic career. Identifying issues that may help or hinder college students can be incredibly important in helping students make the most of their academic years. With the support of their social networks, university facilities, and their own passion and drive, students can achieve a positive college experience that will serve as a launching pad for rewarding and successful careers.

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