

Stress, Sex Differences, and Coping Strategies Among College Students

Ruby R. Brougham · Christy M. Zail ·
Celeste M. Mendoza · Janine R. Miller

Published online: 11 February 2009
© Springer Science + Business Media, LLC 2009

Abstract The sources of stress (academics, financial, family, social, and daily hassles) and coping strategies (self-help, approach, accommodation, avoidance, and self-punishment) of 166 college students were examined. The relationship between sex, specific sources of stress, and coping strategies was also investigated. Students completed a stress assessment inventory and a stress coping inventory based on a 5-factor revised COPE model (Zuckerman and Gagne *Journal of Research in Personality*, 37:169–204, 2003). Results found that college women reported a higher overall level of stress and greater use of emotion-focused coping strategies than college men. College men and women also reported different coping strategies for different stressors; however the use of emotion-focused coping strategies dominated over problem-solving strategies for both men and women. These results have implications for designing stress reduction workshops that build on the existing adaptive emotion-focused strategies of college students.

Keywords Stress · Coping · Sex differences

College has been found to be stressful for many young adults (Pierceall and Keim 2007). College students' reports of being "frequently overwhelmed" increased from 16% in 1985 to 27% in 2002 (Sax 1997, 2003). Past studies also reported that 75% to 80% of college students are moderately stressed and 10% to 12% are severely stressed (Abouserie 1994; Pierceall and Keim 2007). During a typical college semester, high levels of stress have been reported for 52% of college students (Hudd et al. 2000). Clearly, stress among college students has been prevalent and in some cases severe.

It has been hypothesized that emerging adulthood, the transition from adolescence into adulthood, increased college students' vulnerability to stress (Towbes and Cohen 1996). The goals of emerging adulthood were to explore and establish

R. R. Brougham (✉) · C. M. Zail · C. M. Mendoza · J. R. Miller
Department of Psychology, Chapman University, One University Drive, Orange, CA 92866, USA
e-mail: brougham@chapman.edu

identity through salient (for example, friendships and academic), and emerging (for example, occupational and romantic) developmental tasks (Arnett 2000; Roisman et al. 2004). The transition to college from high school challenged young adults to live independently, handle finances, maintain academic standards and integrity, and adjust to a new social life. It also provided an opportunity to modify existing roles (for example, son or daughter) and to adopt new roles (for example, college student). During this transitional process, college students received positive and negative feedback from their choices and modified or abandoned their goals. At the end of this transition, college students had established a foundation for future life goals (Salmela-Aro et al. 2007).

Growth and change were positive and necessary in the transition from dependent adolescent to independent young adult. However, growth and change were often accompanied by the experience of stress. The college students' appraisal of growth and change (for example, threat to well-being) and their response to the growth and change (for example, to take action) interact and result in a stress reaction (Romano 1992). Thus, a greater understanding of college students' stress reactions would be obtained through identifying the events they found to be stressful, and identifying the coping methods they used to manage their stress. Past research found that collegiate stressors included: academics, social relationships, finances, daily hassles (for example, parking and being late) and familial relationships (Abouserie 1994; Blankstein et al. 1991; Crespi and Becker 1999; Frazier and Schauben 1994; Larson 2006; Printz et al. 1999; Ross et al. 1999). Within each domain conflict, insufficient resources, time demands, and new responsibilities had characterized stress.

Previous research has found that college stress levels were often associated with cognitive deficits (for example, attention and concentration difficulties), illness, increased rates of depression and anxiety, and decreased life satisfaction (Bailey and Miller 1998; Chang 2001; Dyson and Renk 2006; Edwards et al. 2001; Lumley and Provenzano 2003; Pritchard et al. 2007). Poor health behaviors were also linked with high levels of collegiate stress. Hudd et al. (2000) found that college students who reported higher levels of stress also consumed a greater amount of "junk food," were less likely to exercise, and less likely to obtain adequate amounts of sleep. Academic performance was also found to be impaired for students who reported high levels of stress (Lumley and Provenzano 2003; Struthers et al. 2000). Thus, physical, psychological, behavioral, and academic difficulties were the cost of stress for college students.

It was posited that coping strategies might decrease the effect of stress on well-being (Lazarus and Folkman 1984). Coping strategies have often been classified into two broad categories: problem and emotion focused strategies. Problem-focused strategies employed behavioral activities, such as action and planning, while emotion-focused strategies involved expressing emotion and altering expectations. College students' use of problem-solving strategies was associated with positive outcomes, such as better health and reduced negative affect (Dunkley et al. 2000; Sasaki and Yamasaki 2007). While college students' use of emotion-focused strategies, particularly the use of avoidance strategies was associated with negative outcomes such as poorer health and increased negative affect (Pritchard et al. 2007). However, some emotion-focused strategies such as acceptance and positive reframing have been associated with increased well-being (Scheier et al. 1994). Although a definitive conclusion has not been reached, in general, college students'

coping strategies that use action, acceptance, and positive reframing in response to stress were found to be adaptive, while coping strategies that use avoidance and emotional expression in response to stress were found to be maladaptive.

The relationship between sex, stress appraisal, and coping strategy use continues to be debated. Past research has found that college women reported feeling more stress than college men (Abouserie 1994; Dusselier et al. 2005; Hudd et al. 2000; Pierceall and Keim 2007; Soderstrom et al. 2000). Although strong support for sex differences in college students' appraisal of stress was found, empirical support for specific stressors that created and maintained stress has been mixed. For example, Misra et al. (2000) found that college women reported higher levels of stress than college men for some stressors such as frustration, self-imposed stress, and pressure in relation to academics. Dyson and Renk (2006), however, found no sex differences in college students' reported stress levels for college and family stressors. Thus, past research has found sex differences in reported levels of stress for college students but strong evidence for specific stressors was not found.

Sex differences have also been found in the use of coping strategies. College women reported greater use of emotion-focused coping strategies including expressing feelings, seeking emotional support, denial, acceptance, and positive reframing than college men (Eaton and Bradley 2008; Ptacek et al. 1994; Stanton et al. 2000). College men, however, reported greater use of some types of emotion-focused strategies such as mental disengagement through the use of alcohol than college women (Kieffer et al. 2006). Furthermore, past research showed that college women who endorsed feminine values were more likely to use emotion-focused coping strategies (Blanchard-Fields et al. 1991; Dyson and Renk 2006). College women also reported greater use of social support than college men (Dwyer and Cummings 2001). Thus, greater use of emotion-focused strategies might be the result of college women's socialization, acceptance of traditional sex roles, and the tendency for women to "tend and befriend" (Dyson and Renk 2006; Zuckerman and Gagne 2003). Unlike emotion-focused strategies, research has not found a clear pattern of sex differences in college students' use of problem-solving strategies to cope with stress (Dyson and Renk 2006; Pritchard and Wilson 2006).

The goals of the present study are the following: (1) to identify the sources of stress and the coping styles of undergraduate students, and (2) to investigate the relationship between specific stressors, sex, and coping strategies. The current study seeks to expand on the past research of Zuckerman and Gagne (2003) and to investigate the relationship between specific stressors, coping strategies, and sex through the use of the 5-factor revised COPE model. The 5-factor revised COPE model is based on a revised form of the COPE inventory (Carver et al. 1989). The five coping responses are self-help, accommodation, approach, avoidance, and self-punishment. The goals of the coping responses are to: (1) self-help by sustaining emotional well-being, (2) approach stress using problem-solving strategies, (3) accommodate stress through acceptance and reframing negative outcomes, (4) avoid stress through denial and blaming others, and (5) self-punish through self-focused rumination and self-blame. Zuckerman and Gagne (2003) found that self-help, approach, and accommodation were associated with greater positive outcomes such as beliefs in realistic control and mastery goals for academic performance. In contrast, college students' avoidance and self-punishment coping strategies were

associated with greater negative outcomes such as self-handicapping and depression. Thus, self-help, approach, and accommodation were identified as adaptive coping responses, while avoidance and self-punishment were identified as maladaptive coping strategies. Zuckerman and Gagne (2003) also found that college women were more likely to use the adaptive strategies of self-help, approach, and accommodation in responding to stress than college men.

In the current study of stress perception and coping among college students, we expected to find the following sex differences: (1) women would report an overall greater stress level than men, (2) women would report greater stress for familial relationships, social relationships and daily hassles than men, (3) women would report greater overall use of self-help, approach and accommodation coping strategies, and (4) women would report greater use of self-help, approach and accommodation in response to the specific stressors of familial relationships, social relationship and daily hassle stress.

Method

Participants

The sample consisted of 166 college students (70 men and 96 women) recruited from a liberal arts university in Southern California. The data was collected in the spring semester of 2007. Each student received research credit in exchange for participating in the study. The majority of the students were freshmen (62%), with the remainder being predominately sophomores (28%), a few were juniors (6%) and seniors (4%). Most students reported their race as Caucasian (70%); the remainder were Latino (9%), Asian (8%), African-American (4%), Pacific Islander (5%) and other (4%).

In response to questions about their employment status, the majority of students reported that they did not have to be employed in order to afford attending the university (67%), however, many students still reported working at least 20 hr/week (50%). The majority of students also reported living on campus (72%). This sample reflected the larger university community of students in terms of race, living on campus, affordability of attending the university, and number of work hours per week.

Measures

Revised COPE Inventory The 40-item revised Cope inventory (Zuckerman and Gagne 2003) was used to measure the following five coping responses to stress: self-help (for example, I try to get emotional support from family and friends), accommodation (for example, I accept the reality of the fact it happened), approach (for example, I do what has to be done, one step at a time), avoidance (for example, I pretend that it has not really happened), and self-punishment (for example, I punish myself). Students were instructed to indicate the extent to which they used a particular coping strategy. They used a five point Likert scale (anchored by 5 = “always use this coping strategy” and 1 = “never use this coping strategy”) to respond to questions about coping styles. In the current study, the five coping responses have good internal reliability as measured by Cronbach’s alpha ranging from .78 to .86.

Student Stress Assessment Students completed a 37 item assessment that identified five sources of stress. The five stress categories were academics (measured by 11 items), familial relationships (measured by 7 items), finances (measured by 4 items), daily hassles (measured by 8 items) and social relationships (measured by 7 items). Students were instructed to indicate the extent to which they experience stress in relation to a specific stressor. They used a five point Likert scale (anchored by 5 = “extremely stressful” and 1 = “not stressful”) to respond to questions about stress. See Table 1 for sample items. The individual items for the Student Stress Assessment test were based on: (1) a review of the collegiate stress literature and (2) sources of student stress identified by the researchers. The Student Stress Assessment test included items from the Student Stress Scale (Insel and Roth 1985), the Life Experience Survey (Sarason et al. 1978), and the Student Stress Survey (Ross et al. 1999). In the current study, the five stress categories have adequate internal reliability as measured by Cronbach’s alpha ranging from .57 to .70.

Employment Status and Demographics Students completed the following questions in relation to employment: (1) whether they were employed, (2) the number of hours they were employed per week, and (3) whether they had to be employed in order to afford to attend the university. The students also completed questions about class standing, housing (on-campus or off-campus) and standard demographic questions about sex and race.

Results

Sex Differences in Stressors

We conducted a Multivariate Analysis of Variance (MANOVA) to examine whether college women and men differed in their overall stress level and in their reported stress levels for the following five stressors: academics, familial relationships,

Table 1 Sample items from the assessment of student stress

Stressor	Sample Item
Academics	Working on final papers or assignments Getting a bad grade on an exam
Familial relationships	Difficulty choosing a major Parents getting a divorce Illness of a family member
Finances	Getting into an argument with a family member Having to pay bills Financial problems
Daily hassles	Overspending Being stuck in traffic Waking up late
Social relationships	Not being able to find parking Breaking up with a girlfriend or boyfriend Difficulties with roommates Dealing with rude people

finances, daily hassles and social relationships. Sex was the independent variable and academic, familial relationship, finance, daily hassle, and social relationship stressors were the dependent variables. The results of MANOVA showed significant sex differences in overall stress levels ($F(1, 164)=8.87, p=.003, \eta^2=.05$; Women $M=2.72, SD=.68$, Men $M=2.38, SD=.79$) and sex differences in stress levels for specific stressors (*Wilks* $\Lambda=.93, F(4, 161)=2.91, p=.023$, partial $\eta^2=.07$).

We conducted an Analysis of Variance (ANOVA) test for each stressor as a follow-up test to the MANOVA. The results of the ANOVAs showed that college women reported greater stress for familial relationships ($F(1, 164)=5.31, p=.022, \eta^2=.03$; Women $M=2.50, SD=.87$, Men $M=2.17, SD=.97$), finances ($F(1, 164)=5.30, p=.022, \eta^2=.03$; Women $M=2.66, SD=1.41$, Men $M=2.15, SD=1.40$), daily hassles ($F(1, 164)=7.01, p=.009, \eta^2=.04$; Women $M=2.98, SD=.78$, Men $M=2.64, SD=.89$), and social relationships ($F(1, 164)=8.54, p=.004, \eta^2=.05$; Women $M=2.97, SD=.98$, Men $M=2.53, SD=.91$) than college men. No significant sex differences were found for academic stress. See Fig. 1.

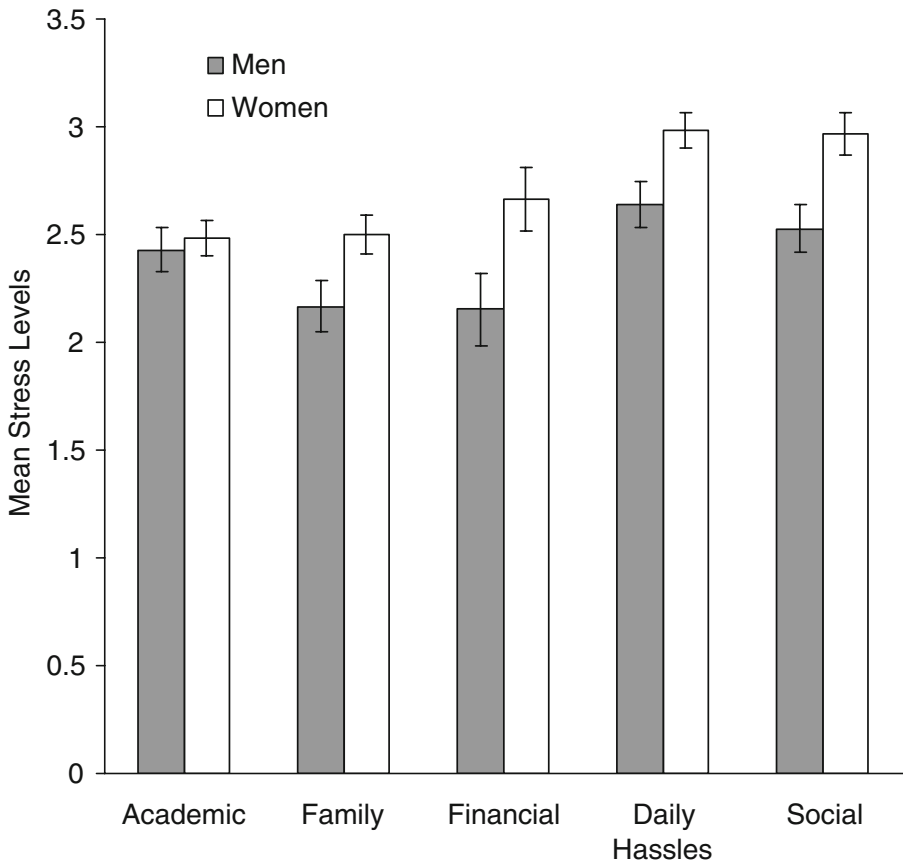


Fig. 1 Sex differences for stressors. Note. The results showed that college women reported significantly greater stress for familial relationships, finances, daily hassles, and social relationships than college men. No significant sex differences were found for academic stress

Sex Differences in Coping with Stress

We conducted a Multivariate Analysis of Variance (MANOVA) to examine whether college women and men differed in their use of the following five stress coping responses: self-help, accommodation, approach, avoidance, and self-punishment. Sex was the independent variable and self-help, accommodation, approach, avoidance, and self-punishment were the dependent variables. The results of MANOVA showed overall sex differences in the use of coping responses ($Wilks \Lambda = .91$, $F(1, 164) = 15.20$, $p = .000$, partial $\eta^2 = .09$; Women $M = 3.22$, $SD = .36$, Men $M = 3.00$, $SD = .35$) and significant sex differences in specific coping responses to stress ($Wilks \Lambda = .85$, $F(4, 161) = 6.97$, $p = .000$, partial $\eta^2 = .15$)

An ANOVA test for each stressor was conducted as a follow-up test to the MANOVA. The results of the ANOVAs showed that college women reported greater use of self-help ($F(1, 164) = 21.24$, $p = .000$, $\eta^2 = .12$; Women $M = 3.62$, $SD = .52$, Men $M = 3.21$, $SD = .59$), approach ($F(1, 164) = 2.99$, $p = .086$ marginally significant, $\eta^2 = .02$; Women $M = 3.42$, $SD = .52$, Men $M = 3.28$, $SD = .49$) and self-punishment ($F(1, 164) = 10.17$, $p = .002$, $\eta^2 = .06$; Women $M = 3.37$, $SD = .87$, Men $M = 2.96$, $SD = .72$) than

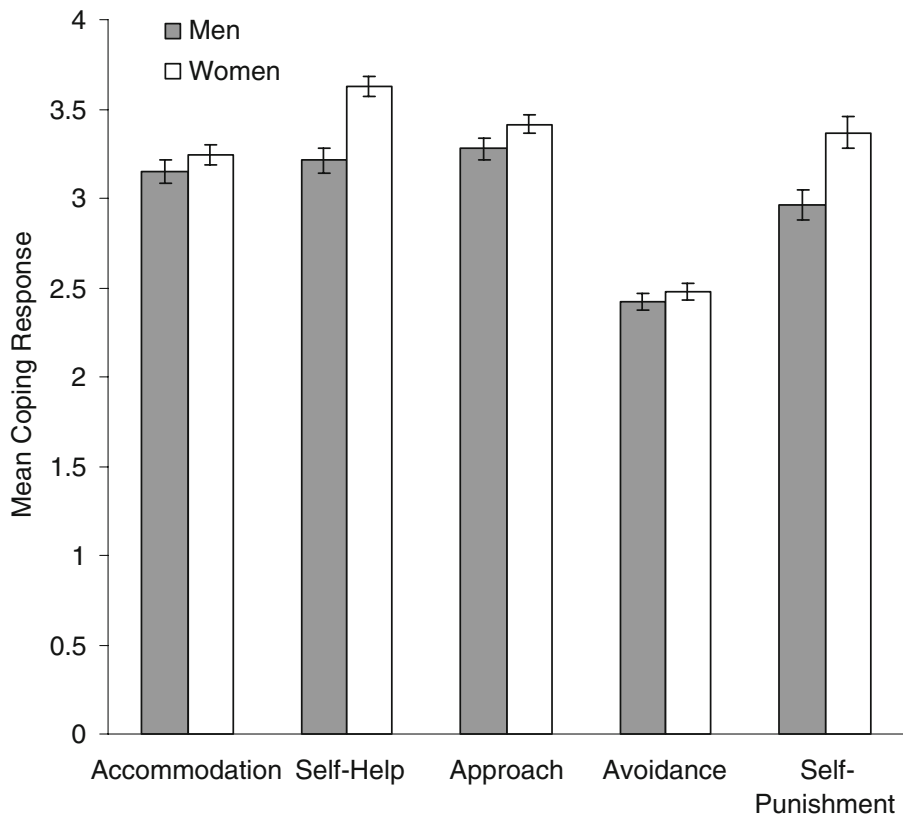


Fig. 2 Sex differences in coping with stress. Note. The results showed that in coping with stress, college women reported greater use of self-help, approach, and self-punishment strategies than college men. No significant sex differences were found for accommodation and avoidance coping strategies

college men. No significant sex differences were found for accommodation and avoidance coping responses to stress. See Fig. 2.

Relationships Among College Students' Stressors and Types of Coping

To examine the relationships among college students' experience of stress for a particular stressor (academics, familial relationships, finances, daily hassles, and social relationships) and the type of coping responses used (self-help, accommodation, approach, avoidance, and self-punishment), correlational analysis were conducted. These correlations are found in Table 2. For college women, a correlation was found between their level of daily hassles and their use of avoidance and self-punishment as a coping response. No other significant relationships were found between stressors and type of coping responses used by college women.

For college men, the following significant positive correlations were found between stressors and coping responses: (1) academic stressors and the use of avoidance and self-punishment coping responses, (2) family stressors and the use of self-help, avoidance, and self-punishment coping responses, (3) finances and the use of accommodation and avoidance coping responses, (4) daily hassles stressors and the use of avoidance and self-punishment coping responses, and (5) social relationships stressors and the use of self-help, self-punishment and avoidance coping responses. No other significant relationships were found between stressor and type of coping response used by college men.

A Fisher's z' transformation (Cohen and Cohen 1983) was computed to test whether sex differences existed for the separate significant correlations found for men and women between stressors and types of coping. The following significant sex differences were found between stressors and coping responses: (1) family stressors and the use of self-punishment ($z=1.99, p=.03$), (2) financial stressors and the use of accommodation ($z=2.66, p=.01$), and (3) social stressors and the use of self-help ($z=2.43, p=.02$).

As seen in Table 2, the correlations among the five R-COPE scales (self-help, accommodation, approach, avoidance, and self-punishment) form two distinct clusters:

Table 2 Correlations among college students' stressors and types of coping

Variables	1	2	3	4	5	6	7	8	9	10
Academic	—	.56**	.40**	.50**	.28**	-.10	-.01	-.06	.17	.20
Family	.58**	—	.19	.26*	.44**	-.05	.11	-.09	.05	.04
Financial	.47**	.44**	—	.30**	.14	-.13	-.05	.00	.05	-.05
Daily hassles	.69**	.61**	.54**	—	.25*	-.02	.17	.07	.26*	.24*
Social	.50**	.56**	.49**	.47**	—	-.12	.03	-.15	.17	.05
Accommodation	-.08	.10	.29*	.07	.14	—	.41**	.50**	-.03	.08
Self-Help	.18	.31**	.23	.18	.34**	.57**	—	.54**	-.06	.02
Approach	.12	.16	-.02	.13	.01	.44**	.53**	—	-.04	.20
Avoidance	.26*	.31**	.26*	.33**	.28*	.04	.06	-.11	—	.50**
Self-punishment	.25*	.34**	.05	.35**	.25*	.02	.22	.25*	.45**	—

Correlations for college women participants are above the diagonal, whereas correlations for college men participants are below the diagonal

* $p<.05$, ** $p<.01$

one consists of avoidance and self-punishment (maladaptive) and the other consists of approach, accommodation, and self-help (adaptive). The maladaptive and adaptive coping distinction is consistent with the Zuckerman and Gagne's (2003) findings.

Relationships Among College Students' Stressors, Types of Coping, Race, Class Standing, and Necessity for Employment

For college women, a correlation was found between daily hassles and class standing ($r(96)=.23, p=.025$) and a correlation was found between being employed to afford school and reporting financial stress ($r(96)=.42, p=.001$). For college men being employed to afford school was correlated with financial stress ($r(70)=.38, p=.005$), daily hassle stress ($r(70)=.34, p=.004$), and the use of accommodation ($r(70)=.28, p=.022$) as a coping response. For college men, a correlation was found between being non-Caucasian and reporting financial stress ($r(70)=-.29, p=.014$).

Discussion

The results of the current study provide some support for sex differences in ratings of stressors and coping responses for college students. Overall, the findings of the study provide mixed support for the hypotheses. As hypothesized, women college students in comparison to men college students reported: (1) higher overall levels of stress, (2) greater stress for familial relationships, social relationships and daily hassles, and (3) greater overall use of self-help and approach to cope with stress. Contrary to the hypothesized relationships between stress and sex, the following was found (1) college women reported greater stress for finances than college men, and (2) college women in comparison to college men reported the use of self-punishment as an overall coping response. Thus, the current study findings are consistent with past studies and provide support for women college students' reports of greater overall stress and greater use of emotion focused strategies (self-help and self-punishment) to cope with stress than college men (Eaton and Bradely 2008; Patake et al. 1994; Stanton et al. 2000).

Although college women reported the overall use of emotion-focused coping for stress, college men reported using emotion-focused coping for a greater number of specific stressors. As for sex differences, college men reported the use self-punishment, a maladaptive strategy, to cope with family stress. College men also reported the use of the following adaptive strategies to cope with stress: (1) accommodation to cope with financial stress, and (2) self-help to cope with social stress. As for sex similarities, both college women and men reported using the maladaptive strategies of avoidance and self-punishment to cope with daily hassles. Thus, for specific stressors college men were found to use both maladaptive and adaptive emotion-focused coping, while college women were found to use only maladaptive emotion-focused coping.

The coping responses of men and women college students provided some evidence for the use of problem-focused strategies. College women in comparison to college men showed a trend for the overall use of approach coping in response to stress. For both women and men college students, problem-focused coping was used less than emotion-focused coping.

Overall the current study extends past findings of Zuckerman and Gagne's (2003) 5-factor revised COPE model in relation to specific stressors. The current study reports a number of results for college men including relationships between specific stressors and coping responses that may have been nonsignificant in past studies due to collecting data from small samples of men (for example, Dyson and Renk 2006). The 5-factor revised COPE separation of emotion-focused coping into adaptive (for example, self-help) and maladaptive (for example, self-punishment) clusters also offered a clear, concise, and reliable method for assessing coping responses in college men and women.

The following limitations should be considered when interpreting the results of the study. One limitation of the current study was the collection of self-reported data. A consequence of self-reported data may be that college men were more reluctant to report the experience of stress or were less aware of stress than college women. Past research has found that college men have less knowledge about health and illness detection behaviors than college women, thus, college men may be less able to detect stress than college women (Davies et al. 2000; Mansfield et al. 2005). Furthermore, for college men, masculine norms such as independence, invincibility, and power may be a barrier for adequate disclosure of stress levels (Davies et al. 2000). Disclosing a high level of stress may threaten college men's beliefs about their own masculinity.

Another limitation was that the undergraduate sample was fairly homogeneous in terms of ethnicity, and affluence (67% of the sample reporting not having to work to afford school). Therefore, the findings of the current study may not generalize to a more diverse college student population. The current study, however, does have important implications regarding stress and sex that applies to the larger university population that is predominately Caucasian and affluent (Median income \$72,000; Higher Education Research Institute 2006; US National Center for Education Statistics 2005).

A few past studies found a developmental trend for undergraduate stress (for example, Misra et al. 2000). Specifically, freshman and sophomores reported greater stress than juniors and seniors. Most studies of college student stress use cross-sectional data or follow college students for a short period of time (Zuckerman and Gagne 2003). Thus, necessary directions for future research are longitudinal studies that would follow the development of coping skills and perceptions of stress over the 4 years of undergraduate education.

Clearly the current study showed that emotion-focused coping strategies for college women and men dominated over problem-solving strategies. Past research suggests that college students' ability to communicate effectively and regulate emotions contributed to maintaining relationships and reducing stress (Skowron et al. 2004). Positive exchange in family relationships, such as social support and opportunities for autonomy were also found to increase college students' ability to handle stress (Kenny and Rice 1995). Thus, creating opportunities for improving college students emotional processing and regulation of emotion should lead to reduced stress and greater use of adaptive coping responses.

A potential application of the current research is to design a stress workshop that builds upon the college students' emotion-focused strengths such as emotional support seeking and maintaining optimism. The workshop would focus on teaching

effective skills of supportive communication including, emotional processing, emotional regulation, reflective communication, and problem solving to both college students and parents. Supportive communication engenders behaviors such as the validation of emotional experience and positive regard, which in turn, facilitates the processing of negative cognitions and emotions (Burleson and Goldsmith 1998). It is the processing of emotions and cognitions rather than avoidance that leads to a more functional appraisal of stressors and the experience of less stress.

We propose that improving supportive communication between college student and parent through participation in a workshop would increase college students' perception of the availability of social support resources. A number of studies have found that social support benefits college student's transition and adjustment to college (for example, Friedlander et al. 2007; Misra et al. 2000). However, freshmen often have fewer friends than upperclassmen and they also report inadequate social support and greater difficult coping with stress than upperclassmen (Dwyer and Cummings 2001). Thus, we suggest that the first stress workshop should be conducted during freshman orientation and follow-up workshops could be conducted online.

Parents are included in the stress workshop because they are a primary and continuous source of social support for college students. Furthermore, parental participation in the workshop is also supported by: (1) Jo Lohman and Jarvis (2000) finding that adolescents and parents who possess accurate perceptions about each other's stressors and coping skills are more likely to use adaptive coping mechanisms in response to stress, and (2) Lopez and Brennan's (2000) finding that that quality of family relationships plays an important role in successful emotional adjustment for young adults.

Overall, the current study provides support for sex differences and similarities in college students' ability to cope with stress. Given that the college years may be a critical period for developing life long coping skills for handling stress and the consistent robust relationship between stress and decreased physical, psychological, social and academic well-being it is imperative that we increase our efforts to teach stress management skills. A stress workshop that capitalizes on college students existing strengths of emotion-focused coping responses and targets both college students and parents to increase adaptive coping skills should result in fewer physical problems, better psychological adjustment, and academic success for college students.

References

- Abouserie, R. (1994). Sources and levels of stress in relation to locus of control and self-esteem in university students. *Educational Psychology, 14*(3), 323–330.
- Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469–480.
- Bailey, R. C., & Miller, C. (1998). Life satisfaction and life demands in college students. *Social Behavior and Personality, 26*, 51–56.
- Blanchard-Fields, F., Sulsky, L., & Robinson-Whelen, S. (1991). Moderating effects of age and context on the relationship between gender, sex role differences, and coping. *Sex Roles, 25*(11–12), 645–660.
- Blankstein, K. R., Flett, G. L., & Koledin, S. (1991). The brief college student hassles scale: Development, validation, and relation with pessimism. *Journal of College Student Development, 32*(3), 258–264.
- Burleson, B. R., & Goldsmith, D. J. (1998). How the comforting process works: Alleviating emotional distress through conversationally induced reappraisals. In P. A. Anderson, & L. Guerrero (Eds.), *Handbook of communication and emotion* (pp. 246–281). San Diego: Academic Press.

- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267–283.
- Chang, E. C. (2001). Life stress and depressed mood among adolescents: Examining a cognitive-affective mediation model. *Journal of Social & Clinical Psychology, 20*(3), 416–429.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (pp. 53–55). Hillsdale: Lawrence.
- Crespi, T. D., & Becker, J. T. (1999). Mental health interventions for college students: Facing the family treatment crisis. *Family Therapy, 26*(3), 141–147.
- Davies, J., McCrae, B. P., Frank, J., Dochnahl, A., Pickering, T., Harrison, B., et al. (2000). Identifying male college students' perceived health needs, barriers to seek help, and recommendations to help men adopt healthier lifestyles. *Journal of American College Health, 48*, 259–267.
- Dunkley, D. M., Blankstein, K. R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping, and perceived social support as mediators and moderators. *Journal of Counseling Psychology, 47*(4), 437–453.
- Dusselier, L., Dunn, B., Wang, Y., Shelley II, M. C., & Whalen, D. F. (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54*(1), 15–24.
- Dwyer, A., & Cummings, A. L. (2001). Stress, self-efficacy, social support, and coping strategies in university students. *Canadian Journal of Counseling, 35*(3), 208–220.
- Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology, 62*(10), 1231–1244.
- Eaton, R. J., & Bradley, G. (2008). The role of gender and negative affectivity in stressor appraisal and coping selection. *International Journal of Stress Management, 15*(1), 94–115.
- Edwards, K. J., Hershberger, P. J., Russell, R. K., & Markert, R. J. (2001). Stress, negative social exchange, and health symptoms in university students. *Journal of American College Health, 50*(2), 75–79.
- Frazier, P. A., & Schauben, L. J. (1994). Stressful life events and psychological adjustment among female college students. *Measurement and Evaluation in Counseling and Development, 27*(1), 280–292.
- Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259–274.
- Higher Education Research Institute (2006). *College freshman—summary characteristics 1970 to 2006* (Table 278). Los Angeles: University of California.
- Hudd, S., Dumlaio, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., et al. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal, 34*(2), 217–227.
- Insel, P. M., & Roth, W. T. (1985). *Core concepts in health* (4th ed.). Palo Alto: Mayfield.
- Jo Lohman, B., & Jarvis, P. A. (2000). Adolescent stressors, coping strategies, and psychological health studied in the family context. *Journal of Youth and Adolescence, 29*(1), 15–43.
- Kenny, M. E., & Rice, K. G. (1995). Attachment to parents and adjustment in late adolescent college students: Current status, applications, and future considerations. *Counseling Psychologist, 23*(3), 433–456.
- Kieffer, K. M., Cronin, C., & Gawet, D. L. (2006). Test and study worry and emotionality in the prediction of college students' reasons for drinking: An exploratory investigation. *Journal of Alcohol and Drug Education, 50*(1), 57–81.
- Larson, E. A. (2006). Stress in the lives of college women: 'Lots to do and not much time.' *Journal of Adolescent Research, 21*(6), 579–606.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lopez, F. G., & Brennan, K. A. (2000). Dynamic processes underlying adult attachment organization: Toward an attachment theoretical perspective on the healthy and effective self. *Journal of Counseling Psychology, 47*(3), 283–300.
- Lumley, M. A., & Provenzano, K. M. (2003). Stress management through written emotional disclosure improves academic performance among college students with physical symptoms. *Journal of Educational Psychology, 95*(3), 641–649.
- Mansfield, A. K., Addis, M. E., & Courtenay, W. (2005). Measurement of men's help seeking: Development and evaluation of the Barriers to Help Seeking Scale. *Psychology of Men and Masculinity, 6*(2), 95–108.
- Misra, R., McKean, M., West, S., & Russo, T. (2000). Academic stress of college students: Comparison of student and faculty perceptions. *College Student Journal, 34*(2), 236–245.

- Pierceall, E. A., & Keim, M. C. (2007). Stress and coping strategies among community college students. *Community College Journal of Research and Practice*, 31(9), 703–712.
- Pritchard, M. E., & Wilson, G. (2006). Do coping styles change during the first semester of college? *Journal of Social Psychology*, 146(1), 125–127.
- Pritchard, M. E., Wilson, G. S., & Yamnitz, B. (2007). What predicts adjustment among college students?: A longitudinal panel study. *Journal of American College Health*, 56(1), 15–21.
- Printz, B. L., Shermis, M. D., & Webb, P. M. (1999). Stress-buffering factors related to adolescent coping: A path analysis. *Adolescence*, 34(136), 715–734.
- Ptacek, J. T., Smith, R. E., & Dodge, K. L. (1994). Gender differences in coping with stress: When stressor and appraisals do not differ. *Personality and Social Psychology Bulletin*, 20(4), 421–430.
- Roisman, G. I., Masten, A. S., Coatsworth, J. D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development*, 75, 123–133.
- Romano, J. L. (1992). Psychoeducational interventions for stress management and well-being. *Journal of Counseling and Development*, 71, 199–202.
- Ross, S. E., Neibling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal*, 33(22), 312–317.
- Sarason, I., Johnson, J., & Siegel, J. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, 46(5), 932–946.
- Sasaki, M., & Yamasaki, K. (2007). Stress coping and the adjustment process among university freshmen. *Counseling Psychology Quarterly*, 20(1), 51–67.
- Sax, L. J. (1997). Health trends among college freshmen. *Journal of American College Health*, 45, 252–262.
- Sax, L. J. (2003). Our incoming students: What are they like? *About Campus*, 8(3), 15–20.
- Salmela-Aro, K., Aunola, K., & Nurmi, J. (2007). Personal goals during emerging adulthood: A 10-Year follow up. *Journal of Adolescent Research*, 22(6), 690–715.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063–1078.
- Skowron, E. A., Wester, S. R., & Azen, R. (2004). Differentiation of self mediates college stress and adjustment. *Journal of Counseling & Development*, 82(1), 69–78.
- Soderstrom, M., Dolbier, C., Leiferman, J., & Steinhardt, M. (2000). The relationship of hardiness, coping strategies, and perceived stress to symptoms of illness. *Journal of Behavioral Medicine*, 23(3), 311–328.
- Stanton, A. L., Kirk, S. B., Cameron, C. L., & Danoff-Burg, S. (2000). Coping through emotional approach: Scale construction and validation. *Journal of Personality and Social Psychology*, 78(6), 1150–1169.
- Struthers, C. W., Perry, R. P., & Menec, V. H. (2000). An examination of the relationship among academic stress, coping, motivation and performance in college. *Research in Higher Education*, 41(5), 581–592.
- Towbes, L. C., & Cohen, L. H. (1996). Chronic stress in the lives of college students: Scale development and prospective prediction of distress. *Journal of Youth and Adolescence*, 25, 199–217.
- US National Center for Education Statistics (2005). *College enrollment by selected characteristic*. Washington, D.C.: US National Center for Education Statistics, Digest of Education Statistics Table 272.
- Zuckerman, M., & Gagne, M. (2003). The COPE revised: Proposing a 5-factor model of coping strategies. *Journal of Research in Personality*, 37, 169–204.

Copyright of *Current Psychology* is the property of Springer Science & Business Media B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.