
Freshmen Adaptation to University Life: Depressive Symptoms, Stress, and Coping

▼
Rachael Dyson and Kimberly Renk

University of Central Florida

Attending a university for the first time can be a stressful experience for many new college students. This study examines the relationships among femininity and masculinity, depressive symptomatology, levels of stress, and the types of coping strategies used by college freshmen. Results of this study suggest that these variables were related uniquely for first-year college students. Masculinity and femininity significantly predicted problem-focused coping, and femininity significantly predicted emotion-focused coping. Further, the levels of family and college stress reported by college students, as well as their endorsement of avoidant coping, significantly predicted their levels of depressive symptoms. Overall, the results of this study suggest that understanding the relationships among the gender role, the levels of depressive symptomatology, and the levels of stress exhibited by college freshmen may be important in facilitating their transition and adjustment to university life. © 2006 Wiley Periodicals, Inc. *J Clin Psychol* 62: 1231–1244, 2006.

Keywords: adjustment; depression; stress; coping

Attending a university for the first time can be a stressful experience for many new college students. First, new college students are beginning their transition from adolescence to adulthood. In fact, the term *emerging adulthood* has been proposed by Arnett (2000) to describe the culturally constructed period of extended adolescence that occurs in industrialized countries when higher education (or some other form of preparation for adulthood) is undertaken. Individuals in this period range in age from 18 to 25 years old and tend to not view themselves as adolescents or adults as they are in the pursuit of identity exploration. In this process, individuals in this age range may take on many roles (e.g., university education, obtain fulltime employment) and work toward individuating from their family of origin (Arnett, 2000).

Correspondence concerning this article should be addressed to: Kimberly Renk, University of Central Florida, Department of Psychology, P.O. Box 161390, Orlando, FL 32816. E-mail: krenk@pegasus.cc.ucf.edu

The unfamiliarity of university life as individuals make the transition to adulthood can challenge an individual's personal security, need for acceptance, need for comfort (Blimling & Miltenberg, 1981), and social support network (Beck, Taylor, & Robbins, 2003). As a result, many incoming freshmen may have difficulty adapting to university life. Given the many implications of transitioning to university life for college freshmen, continued examination is warranted of the characteristics of college students, such as (a) their gender role, (b) the levels of stress that they experience during their first year at a university, (c) the strategies that they use to cope with such stress, and (d) the levels of depressive symptomatology that they experience.

Adaptation

The transition to a new university setting can be viewed within the context of the greater concept of adaptation. The idea of adaptation stems from Selye's (1936) general adaptation syndrome, in which a state of adaptation or adjustment must occur following a stressful experience as a state of alarm cannot be maintained over a long period without causing exhaustion. To adapt to their surrounding environment, an individual must cope with and manage problems, challenges, and demands in his or her daily life (Simons, Kalichman, & Santrock, 1994). Individuals rely upon behavioral changes and coping strategies when adapting to their environment (Creer, 1997) and actively engage in shaping their environment to meet their personal needs and goals (Atwater, 1987). In some cases, particularly when the immune system is suppressed, this process of adaptation and adjusting to stress may be related to the development of disease symptoms (Stephoe, 1991), although the severity and duration of any symptomatology that may develop may vary widely (Cohen & Williamson, 1991) or not develop at all.

Attending a university for the first time may prove to be a crucial test of an individual's adjustment. In addition to the unfamiliarity of university life, freshmen may doubt whether they will be able to meet the expectations of parents and friends in addition to the expectations that they have for themselves (Blimling & Miltenberger, 1984). Because of these factors, almost all new students go through an adjustment phase upon entry to a university, with each student varying in his or her pace of development (Blimling & Miltenberger, 1984). Overall, leaving home and separating from his or her family, friends, and neighborhood to attend a university may have a lasting effect on an individual's future development (Margolis, 1981). Further, the experience of such a significant adjustment may be related closely to the development of physical illness or other symptoms. For example, the development of physical illness was found to be more likely in individuals who experienced an accumulation of many difficult life experiences within a relatively brief period of time (Cohen, Tyrell, & Smith, 1993; Dohrenwend, Dohrenwend, Dodson, & Shrout, 1984). It may be the case that such individuals would be more prone to develop psychological symptoms, such as depression, as well.

To examine these issues more closely, Fisher and Hood (1987) studied the psychological adjustment of prospective university students. The results of this study suggested that students experienced a significant increase in psychological disturbance, including depression, obsessionism, and absent-mindedness, following their transition to a university setting. Further, other researchers have suggested that particular aspects of the transition to a university setting may be related to the development of psychological symptoms. For example, Fisher, Frazer, and Murray (1986) demonstrated that being homesick was related significantly to being absent-minded in a group of students transitioning to university life. Beck and colleagues (2003) also found that those beginning college students who had an interpersonal or sociotropic orientation exhibited more symptoms of

homesickness and depression. Given that symptoms such as depression may be related closely to university students' academic performance, understanding the amount of stress and the types of coping strategies used by college students may be important in facilitating a positive transition to a university setting.

College Freshmen's Experience of Stress

The experience of stress is likely to be a regular occurrence in the lives of new college students given the nature of the transition that they are making. In general, stress occurs when there are demands on an individual that exceed his or her coping capabilities (Dressler, 1991). Reaction to stress may vary depending on the nature of the events that are occurring and the characteristics of the individual (Mikhail, 1985). Nonetheless, all changes requiring adaptation, even when there are positive components to the changes, can result in stress (McNamara, 2000). In particular, adjusting to university life may be particularly stressful for students (e.g., Lapsley, Rice, & Shadid, 1989). For example, freshmen reported more psychological dependencies on their mothers and fathers as well as poorer social and personal-emotional adjustment to university life than did upperclassmen (Lapsley et al., 1989). Individual personality traits also may play a role in the experience of stress in college freshmen, with motivational variables, as well as differences in belief systems and coping abilities, being important in the appraisal of stressful situations (Lazarus, 1976). Such characteristics, as well as the type of coping strategies that are utilized, may be related to college students' adjustment.

Coping

When faced with the transition to a university setting, new college students will have to draw upon coping strategies to deal with their experience of stress. Coping can be defined as cognitive and behavioral attempts to alter events or circumstances that are threatening (Dressler, 1991). Traditionally, coping strategies have been dichotomized into problem-focused coping strategies, or making attempts to actively alter a problematic situation, and emotion-focused coping strategies, or managing emotional responses to a problematic situation (e.g., Lazarus & Folkman, 1984; Snyder, 1999). These types of coping strategies have been related to different adaptive outcomes, with problem-focused coping being associated with reduced levels of depression (e.g., McNamara, 2000) and emotion-focused coping being associated with maladaptive functioning and strain (Terry, 1991). Other descriptions of coping behavior (e.g., Roth & Cohen, 1986) also have incorporated avoidant types of coping strategies, which may include wishful thinking, self-distraction, denial, or mental or behavioral disengagement. These strategies have been associated with negative outcomes for individuals (McNamara, 2000), especially if sustained over the long term. Given the connection between an individual's functioning and coping strategies, the types of coping strategies used by college students may prove to be important to their adjustment to attending a university.

It is also noteworthy that the use of coping strategies has been shown to vary with different individual characteristics. In general, it has been documented that men are more likely to use problem-focused coping strategies, whereas women are more likely to use emotion-focused coping strategies (e.g., Lazarus & Folkman, 1984). The masculinity and femininity of individuals also have been related to the types of coping strategies that they use. In particular, individuals who rated themselves high in masculine characteristics have been shown to use more problem-focused coping strategies, whereas individuals

who rated themselves high in feminine characteristics have been shown to use more emotion-focused coping strategies (Nezu & Nezu, 1987; Renk & Creasey, 2003). Finally, freshmen who have demonstrated secure attachment styles are more likely to exhibit more adaptive problem coping, such as less reactive and suppressive coping behaviors (Lopez & Gormley, 2002). Thus, it may be important to examine characteristics such as sex and gender role in the context of stress and coping strategies.

Possible Outcomes of the Transition to University Life

As noted thus far, the need to adjust to a new situation, the experience of stress, and the use of different types of coping strategies may be related to the experience of physical and psychological symptoms in individuals. Further, the experience of developmental transitions, such as attending a university for the first time, may be related to the experience of different psychological symptoms as well. Although an individual's maladaptive reactions to stress may decline when stressful circumstances dissipate or when the individual learns to live with the new conditions (Sarason & Sarason, 1999), individuals may experience many negative symptoms during the transition period. Symptoms of depression may be particularly noticeable as students adjust to university life (e.g., Sarason & Sarason, 1999). Individuals may be more likely to experience feelings of hopelessness and sadness during transition periods when they are having difficulty alleviating or coping with stress effectively (Quinn, 1997). In particular, college students' neuroticism, loneliness, and interpersonal mistrust may contribute to the development of depression (Rich & Scovel, 1987). Further, loneliness and low levels of family support, as well as social problem solving and self-appraisal, may interact with the experience of life stress to predict depression (Rich & Bonner, 1987). Thus, the stress related to transitioning to university life may be related to the experience of depressive symptomatology.

The Current Study

A positive initial transition to university life is important in relation to college students' subsequent mental health and academic performance. We thus examined the relationships among college freshmen's sex, their gender role, the levels of stress that they experience during their first year at a university, the types of coping strategies that they use, and the level of depressive symptomatology that they experience. It was expected that the masculinity and femininity of college freshmen would not be related to the levels of stress experienced but would be related to the types of coping strategies that they endorsed. Further, it was expected that levels of depressive symptomatology that they experienced would be related to their levels of stress and the use of all types of coping strategies. Finally, it was expected that the levels of stress and coping strategies that freshmen endorsed would account for significant variance in the prediction of depressive symptomatology, over and above that accounted for by sex and gender role characteristics. In particular, it was anticipated that the levels of stress that freshmen endorsed would be related to the coping strategies that they used, which, in turn, would be related to their experience of depressive symptomatology.

Method

Participants

Seventy-four college freshmen (23 men and 51 women) from a southeastern university participated in this study. Participants ranged from 18 to 22 years old ($M = 18.47$ years,

$SD = .71$ years). The majority of the participants were White (62.2%), with the remainder of the sample varying in their identified ethnicity (17.6% Hispanic American, 10.8% African American, 5.4% Asian American, and 4.1% listing some other ethnic classification). Most of the participants also reported that they were single (90.5%), although 2.7% of the sample reported that they lived with a partner, 1.4% reported that that they were married, and 5.4% reported that they had some other relationship status.

Many of the participants reported that they did not live with their parents (75.7%; vs. 24.3% who did live with their parents) but that their parents paid for their expenses at school in full (66.0%) or in part (12.8%; vs. 21.2% whose parents did not pay for their expenses). Further, most participants in the sample were in contact with their mothers at least once per day (35.1%) or at least once per week (45.9%). In addition, most participants in the sample were in contact with their fathers at least once per day (23.0%) or at least once per week (37.8%). Thus, the characteristics of this sample were consistent with those described for the emerging adulthood period, in that participants were beginning to separate from their families of origin but still maintained a strong connection to them.

Measures

Bem Sex-Role Inventory. The Bem Sex-Role Inventory (BSRI; Bem, 1974) was used to assess participants' gender role. This measure consists of 60 adjectives (20 are stereotypically masculine, 20 are stereotypically feminine, and 20 are neutral). It should be noted that masculinity and femininity are two separate but related constructs according to the conceptualization for this measure (Bem, 1974). Although the scores for these two characteristics were used to derive four gender identity categories (i.e., feminine, masculine, androgynous, undifferentiated) in the original scoring of this measure, these two scores were kept as continuous variables for this study so that power could be optimized. Further, in support of maintaining a continuous scoring of these two scales, other researchers (e.g., Spence, 1993) have suggested that the masculinity and femininity scales are better described as measuring instrumentality and expressivity, respectively. Thus, scores were obtained for both masculinity and femininity by taking an average of the scores given to their respective adjectives. Higher scores indicated higher levels of masculinity and femininity. Previous research has demonstrated that the BSRI has had satisfactory test-retest reliability and internal consistency (ranging from .90 to .93 and from .80 to .86, respectively; Bem, 1974). In the current study, the masculinity and femininity subscales demonstrated adequate internal consistency (.86 and .82, respectively).

Beck Depression Inventory-Second Edition. Participants completed the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), a 21-item self-report instrument designed to assess symptoms of depression consistent with the depressive disorders listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision* (American Psychiatric Association, 2000). Higher scores indicated higher levels of depressive symptomatology. This measure has been shown to have adequate reliability (a range of .92 to .93 for internal consistency, and a measure of .93 for test-retest reliability) and validity (Beck et al., 1996). In this study, the total score on this measure had an internal consistency of .87.

Young Adult-Family Inventory of Life Events and Strains. Participants completed the Young Adult-Family Inventory of Life Events and Strains (YA-FILES) devised by McCubbin, Patterson, and Grochowski (Corcoran & Fischer, 2000) as a measure of the stressors that they were experiencing (Grochowski & McCubbin, 1991). This measure

includes two sections, Family Life Changes and College Changes. Although it is suggested that the stressors experienced by other family members should be weighted equally as those experienced by the participant in the final score, the stressors that were experienced by the participants themselves were weighted more heavily than those experienced by family members for the purposes of this study. Higher scores indicated higher levels of stress regarding family life changes and college changes. This measure has demonstrated adequate psychometric properties in previous studies (Corcoran & Fischer, 2000). In this study, the Family Life Changes and College Changes scales demonstrated adequate internal consistency (.78 and .71, respectively).

The COPE Scales. Participants completed the COPE Scales (Carver, Scheier, & Weintraub, 1989) to assess the types of coping that were used in response to stressors experienced during the first year of college. This measure is composed of 15 scales, with higher scores indicating higher levels of use of each type of coping. The psychometric properties of this measure have been adequate in previous studies, with Chronbach's alpha reliability coefficients for each of the subscales except for one falling above .60 (e.g., Carver et al., 1989). In this study, scores for Problem-Focused Coping (composed of the following subscales: Active Coping, Planning, Suppression, Restraint, and Seeking Instrumental Support), Emotion-Focused Coping (composed of the following subscales: Seeking Emotional Support, Positive Reinterpretation, Acceptance, Denial, and Religion), and Avoidant Coping (composed of the following subscales: Behavioral Disengagement, Mental Disengagement, Drug Use, Humor). In this study, each of these scales had adequate internal consistency (.87, .79, and .81, respectively).

Procedure

Freshmen participants were recruited for the completion of this questionnaire study and were offered extra credit toward a psychology course of their choosing. Participants attended group research sessions, where they reviewed and signed an informed consent with a research investigator. During the duration of the data collection session, participants had access to an investigator for questions and clarification. Following the completion of their informed consent, participants completed the BSRI, the BDI-II, the YA-FILES, and the COPE subscales, as well as a demographics form. After completing the packet of questionnaires, participants were provided with a debriefing sheet to further clarify the purpose of the study, to provide references that may be of interest to the participants, and to provide the contact information of the faculty investigator. Investigators also addressed any questions that may have arisen during participants' completion of their research questionnaires.

Results

Gender Differences

To examine differences between male and female college student participants on student gender role, the experience of family and college life stressors, the types of coping strategies that participants endorsed, and the experience of depressive symptomatology, a multivariate analysis of variance was conducted. These results can be found in Table 1. Male participants endorsed significantly greater levels of masculinity ($p < .001$), but significantly lower levels of femininity ($p < .009$), than female participants. There were no significant differences between male and female participants in the levels of family

Table 1
Means and Standard Deviations for Male Versus Female Participants

Variables	Males		Females		F
	M	SD	M	SD	
Masculinity	5.07	.74	4.46	.70	11.53***
Femininity	4.41	.76	4.84	.59	7.17**
Family life change stressors	46.70	6.31	47.55	6.83	2.54
College change stressors	29.26	2.40	29.33	2.77	.01
Problem-focused coping	2.75	.31	2.65	.48	.65
Emotion-focused coping	2.60	.30	2.58	.48	2.69
Avoidant coping	2.17	.51	2.04	.39	1.84
Depression	11.39	5.79	10.59	7.95	.19

** $p < .01$. *** $p < .001$.

life-change stress or the levels of college change stress. Further, there were no significant differences between male and female participants in their reports of using problem-focused coping, emotion-focused coping, and avoidant coping strategies. Finally, male and female participants did not differ in their experience of depressive symptomatology.

Relationships Among College Student Characteristics, Levels of Stress, and Types of Coping

To examine the relationships among college students' characteristics, the level of stress that they experienced, and the types of coping strategies that they used, correlational analyses were conducted. These correlations can be found in Table 2. The masculinity and femininity of male participants were unrelated to depressive symptomatology. For female participants, however, masculinity was unrelated to depressive symptomatology, whereas femininity was related significantly to depressive symptomatology. In addition, the masculinity and femininity of male participants were not related significantly to the levels of family life and

Table 2
Correlations Among Study Variables

Variables	1	2	3	4	5	6	7	8
1. Masculinity	—	.41*	-.35	.08	-.18	.65**	.51**	.15
2. Femininity	.07	—	.06	.03	.02	.31	.48**	.42**
3. Depression	-.14	-.31*	—	.16	.33	-.26	-.09	.28
4. Family life change stressors	.11	-.14	.31*	—	.14	.20	.04	.51*
5. College change stressors	.08	-.03	.40**	.19	—	-.35	-.31	.48*
6. Problem-focused coping	.25	.49**	-.22	.01	.09	—	.62**	.31
7. Emotion-focused coping	.21	.45**	-.16	.04	.07	.74**	—	.27
8. Avoidant coping	-.06	-.07	.29*	-.13	.13	.26	.28*	—

Note. Correlations for male participants are above the diagonal, whereas correlations for female participants are below the diagonal.

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

college change stress. For female participants, masculinity and femininity also were not related significantly to the levels of family life and college change stress.

For male participants, masculinity was related significantly to the levels of problem-focused coping and emotion-focused coping strategies that were endorsed, but was not related to the levels of avoidant coping strategies. In contrast, for male participants, femininity was related significantly to emotion-focused coping and avoidant coping strategies, but was not related to the levels of problem-focused coping strategies. For female participants, masculinity was related significantly to the levels of problem-focused coping strategies but was not related to the levels of emotion-focused coping or avoidant coping strategies that were endorsed. In contrast, the femininity of female participants was related significantly to the levels of problem-focused coping and emotion-focused coping strategies but was not related to the levels of avoidant coping strategies that were endorsed.

For male participants, levels of depressive symptomatology were not related to levels of family life or college change stress. For female participants, however, levels of depressive symptomatology were related to levels of family life and college change stress. For male participants, levels of depressive symptomatology were not related significantly to the levels of problem-focused coping, emotion-focused coping, and avoidant coping strategies that were endorsed. For female participants, levels of depressive symptomatology also were not related significantly to the levels of problem-focused coping and emotion-focused coping that were endorsed. Levels of depressive symptomatology reported by female participants were related to the levels of avoidant coping strategies that were endorsed, however.

Predicting Coping Strategies

To determine whether college students' characteristics and their experience of stress were predictive of the types of coping strategies that college students used, a series of regression analyses were conducted. For each regression equation, sex, masculinity, femininity, level of depressive symptomatology, family life-change stress, and college change stress were included as predictor variables. The different types of coping strategies served as the criterion variables. These findings are reported in Table 3.

College students' characteristics and levels of stress significantly predicted problem-focused coping, $F(6,67) = 4.21, p < .001$. In particular, both masculinity ($p < .05$) and femininity ($p < .002$) were significant predictors of problem-focused coping. Higher levels of masculinity, $r = .35, p < .002$, and femininity, $r = .37, p < .001$, were related to greater endorsement of problem-focused coping strategies.

College students' characteristics and levels of stress also significantly predicted emotion-focused coping, $F(6,67) = 3.33, p < .006$. In this case, only femininity ($p < .0008$) significantly predicted emotion-focused coping strategies, with higher levels of femininity being related to greater endorsement of emotion-focused coping strategies, $r = .40, p < .0004$.

Finally, college student characteristics and stressors did not predict significantly the levels of avoidant coping strategies, $F(6,67) = 1.99, p < .08$.

Predicting Levels of Depressive Symptomatology Experienced by Freshmen

To examine the predictive value of freshmen-level college students' characteristics, the level of stress that they experienced, and the types of coping strategies that they used with regard to depressive symptomatology, a hierarchical regression analysis was conducted. Predictor variables were entered in three steps. Specifically, sex, masculinity, and

Table 3
Regression Results for Coping Strategies

Type of coping/variables	Parameter estimate	<i>t</i>
Problem-focused coping ($R^2 = .27$)		
Sex	-.14	-1.20
Masculinity	.14	2.03*
Femininity	.24	3.26**
Depression	-.01	-1.32
Family Life Change Stressors	.01	.82
College Change Stressors	.01	.44
Emotion-focused coping ($R^2 = .23$)		
Sex	-.09	-.74
Masculinity	.11	1.56
Femininity	.26	3.51***
Depression	-.00	-.52
Family life change stressors	.00	.59
College change stressors	.00	.15
Avoidant coping ($R^2 = .15$)		
Sex	-.16	-1.35
Masculinity	.02	.25
Femininity	.12	1.56
Depression	.02	1.95
Family life change stressors	.00	.08
College change stressors	.02	1.19

* $p < .05$. ** $p < .01$. *** $p < .001$.

femininity were entered in Step 1; levels of family life and college change stress were entered in Step 2; and levels of problem-focused, emotion-focused, and avoidant coping strategies were entered in Step 3. Levels of depressive symptomatology were used as the criterion variable. These results are presented in Table 4.

In Step 1, college student characteristics did not predict significantly the levels of depressive symptomatology, $F(3, 70) = 1.57, p < .20$. In Step 2, the addition of the levels of family life and college change stress resulted in a significant equation, $F(5, 68) = 4.73, p < .0009$. In particular, levels of family life change stress ($p < .04$) and college change stress ($p < .002$) were significant predictors, with greater levels of family life and college change stress being associated with higher levels of depressive symptomatology, $r = .27, p < .02$, and $r = .39, p < .0007$, respectively. In Step 3, the equation remained significant with the addition of the coping strategies, $F(8, 65) = 4.08, p < .0006$. In particular, levels of family life change stress ($p < .04$) and college change stress ($p < .01$) were still significant predictors. Avoidant coping also was a significant predictor ($p < .02$). In this case, higher levels of avoidant coping strategies were related to higher levels of depressive symptomatology, $r = .28, p < .02$.

The pattern of results for the above-reported hierarchical regression gave the appearance that coping strategies may be mediating the relationship between family life and college change stress and depressive symptomatology (i.e., the beta weights for family life and college change stress decreased with the entry of avoidant coping strategies). Therefore, more specific regression analyses (consistent with those suggested by Baron and Kenny, 1986) were conducted to determine if a mediational relationship was present. First, levels of family life and college change stress were used to predict the potential

Table 4
Hierarchical Regression Results for Depressive Symptomatology

Steps/variables	Parameter estimate	<i>t</i>
Step 1 ($R^2 = .06$)		
Sex	-.97	-.46
Masculinity	-1.60	-1.31
Femininity	-1.86	-1.38
Step 2 ($R^2 = .26$)		
Sex	-1.57	-.83
Masculinity	-1.89	-1.71
Femininity	-1.52	-1.24
Family life change stressors	.25	2.10*
College change stressors	.95	3.25***
Step 3 ($R^2 = .33$)		
Sex	-1.21	-.65
Masculinity	-1.27	-1.13
Femininity	-1.04	-.79
Family life change stressors	.24	2.11*
College change stressors	.78	2.67**
Problem-focused coping	-4.12	-1.59
Emotion-focused coping	.46	.18
Avoidant coping	4.35	2.33*

* $p < .05$. ** $p < .01$. *** $p < .001$.

mediators (i.e., problem-focused, emotion-focused, and avoidant coping strategies). Next, levels of family life and college change stress were used to predict depressive symptomatology. Finally, family life and college change stress, as well as the coping strategies, were used to predict depressive symptomatology. A mediational effect would be present if the potential mediator was predicted by family life and college change stress in the first equation, if depressive symptomatology was predicted by family life and college change stress in the second equation, and if the potential mediator alone predicted depressive symptomatology in the last equation.

In the first equations, levels of family life and college change stress did not predict significantly the use of problem-focused coping strategies, $F(2, 71) = .82, p < .44$, emotion-focused coping strategies, $F(2, 71) = .07, p < .93$, or avoidant coping strategies, $F(2, 71) = 2.72, p < .07$. In the second equation, the levels of family life and college change stress significantly predicted levels of depressive symptomatology, $F(2, 71) = 6.19, p < .003$, with levels of college change stress serving as a significant predictor ($p < .001$). Finally, when both levels of stress and coping strategies were entered into the equation, the equation was significant, $F(5, 68) = 4.60, p < .001$. In this equation, levels of college change stress remained a significant predictor ($p < .004$), albeit with a lower beta weight, and avoidant coping strategies served as a significant predictor as well ($p < .01$).

Discussion

Overall, the results of this study suggested that assessing freshmen college students' sex, their gender role, the levels of stress that they experience, and the types of coping strategies that they use during their transition to university life may assist in providing a better

understanding of the levels of depressive symptomatology that they experience. Further, the types of coping strategies that freshmen choose to use may have implications for the adjustment new college students have to university life. Thus, these variables should be examined thoroughly when a freshman who is having difficulty contacts university resource services for assistance. By doing a thorough examination of these variables, those who work to help freshmen with their transition to university life may be better informed about the needs of these individuals and come to a better understanding as to how to assist these students with decreasing their levels of depressive symptomatology and providing a means of fostering a positive adjustment.

Overall, there were not many differences between male and female participants on the variables assessed in this study. In particular, male and female participants endorsed similar levels of stress, coping strategies, and depressive symptomatology. This lack of differences was surprising in that previous studies have documented differences in the use of coping strategies based on the sex of the participants examined. In particular, males have been found to endorse higher levels of problem-focused coping strategies, whereas females have been found to endorse higher levels of emotion-focused coping strategies (e.g., Lazarus & Folkman, 1984). Given our findings, it is possible that men and women have begun to adopt similar coping strategies. Such similarity may be due to sex expectations changing over time and men and women taking on roles that are more similar. The findings of this study also may be attributed to the fact that all participants in this study were college students and may be more liberal in their thinking about behaviors that are appropriate for men and women. In contrast, male participants endorsed significantly higher levels of masculinity and lower levels of femininity than did female participants. This finding was consistent with those of several previous studies (Bem, 1974; Renk & Creasey, 2003).

Male and female participants did demonstrate different patterns of relationships among the variables examined in this study, however. For example, with regard to male participants, masculinity was related positively to the use of problem-focused and emotion-focused coping strategies, whereas femininity was related positively to emotion-focused and avoidant coping strategies. In contrast, the femininity of female participants was related negatively to their ratings of depressive symptomatology and was related positively to the use of problem-focused and emotion-focused coping strategies. Finally, for female participants only, levels of depressive symptomatology were related positively to levels of family life and college change stress and negatively to the use of avoidant coping strategies. Some of the relationships examined in this study may have failed to reach significance for male participants due to the small number of male participants relative to female participants in this study. Overall, however, these relationships suggest that the gender role of freshmen college students may be related closely to their use of different types of coping strategies and to the levels of depressive symptomatology experienced by female freshmen college students.

With regard to the prediction of coping strategy use, the femininity of participants proved to be an important variable in the prediction of problem-focused and emotion-focused coping strategy use. In the case of problem-focused coping strategies, those who endorsed higher levels of masculine and feminine qualities also endorsed greater use of this type of coping strategy. Femininity of the participants also was an important predictor in the case of emotion-focused coping strategies, with femininity demonstrating a positive relationship with the use of this type of strategy. Although previous studies have documented similar relationships between femininity and emotion-focused coping strategies, other studies have not documented a relationship between femininity and problem-focused coping strategies (e.g., Blanchard-Fields, Sulsky, & Robinson-Whelen, 1991). These findings, however, may make sense in the context of individuals who would

previously be considered androgynous (i.e., individuals who endorse high levels of masculine and feminine characteristics). Such individuals were thought to use more balanced coping strategies (Patterson & McCubbin, 1984) and were more flexible in their problem-solving strategies (Babladelis, 1978).

With regard to the levels of depressive symptomatology experienced by freshmen college students, the levels of family life and college change stress were significant predictors. Similar to the findings of previous studies, higher levels of stress were related to higher levels of depressive symptomatology. In addition, the use of avoidant coping strategies was a significant predictor of depressive symptomatology. This finding is also similar to those of previous studies that have suggested that avoidant coping strategies are associated with negative outcomes for individuals (McNamara, 2000), especially if sustained over the long term. This pattern of results was examined further for the presence of a mediator using a series of regressions suggested by Baron and Kenny (1986). Although the results from these regressions did not suggest that there was a strong mediational effect in action, there were some interesting trends in the results. For example, although not significant, there was some suggestion that college change stress may be related to the use of avoidant coping. Further, the beta weight for college change stress decreased in the presence of avoidant coping strategies when predicting depressive symptomatology. Thus, the pattern of results in this study did suggest that further research should be conducted to clarify the role of avoidant coping strategies in the relationship between stress and depressive symptomatology. In particular, it may be the case that those students who are experiencing high levels of college change stress may be utilizing more avoidant coping strategies and, in turn, experiencing higher levels of depressive symptomatology.

The findings of this study must be viewed within the context of its limitations. First, the sample size for this study was somewhat low. This was particularly true when one compares the number of male participants to the number of female participants who took part in this study. This disparity in male versus female participants may have resulted in some of the true relationships among variables for males being obscured. In addition, the sample of college freshmen examined in this study was relatively homogeneous with regard to their ethnicity, marital status, and involvement of their parents in their lives and in support of their education. As a result, these findings may not be generalizable to other, more diverse samples of college freshmen. Second, only the self-report of the participants themselves was collected as part of this study. Finally, because this study was not longitudinal in design, the results provide only a snapshot of coping behavior and the relationships among the variables examined in this study.

Overall, the findings of this study may provide clues as to which individuals may be likely to adjust adequately and which individuals may be likely to have difficulties adjusting when entering university life for the first time. First, female participants who tended to endorse higher levels of femininity also reported higher levels of problem-focused and emotion-focused coping strategies and lower levels of depressive symptomatology. Given that levels of depressive symptomatology were not related significantly to the levels of problem-focused and emotion-focused coping strategies used by these new college students, it may be the case that a third variable that was not examined in this study was related to both of these variables and promoting a healthy adjustment for these students. It also may be the case that being more expressive, which has been related to femininity (e.g., Spence, 1993), helps individuals to adapt to new environments, such as the first-time experience of university life. Further, although only significant in the case of female participants, both male and female participants who endorsed greater levels of depressive symptomatology also reported greater amounts of college change stress and greater use of avoidant coping strategies.

Overall, the findings of this study suggest that those new college students who are experiencing stress in the context of their college transition may be more likely to avoid dealing with these difficulties. In addition, the use of avoidant coping strategies was related to higher levels of depressive symptomatology. Thus, future research and clinical work should further examine interventions that address college students' tendencies to use avoidant coping strategies and how these interventions may prevent depressive symptomatology from developing. Given that new college students who are entering their first year in a university setting also are beginning their transition to adulthood, they may be particularly vulnerable to the experience of stress and depressive symptomatology. As a result, more efforts should focus on understanding their experience of stress, their use of coping strategies, and their experience of depressive symptomatology.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.-text rev.). Washington, DC: Author.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teen through the twenties. *American Psychologist*, *55*, 469–480.
- Atwater, E. (1987). *Psychology of adjustment: Personal growth in a changing world* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Babladelis, G. (1978). Sex-role concepts and flexibility on measures of thinking, feeling, and behaving. *Psychological Reports*, *42*, 99–105.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II: Manual*. San Antonio: The Psychological Corporation.
- Beck, R., Taylor, C., & Robbins, M. (2003). Missing home: Sociotropy and autonomy and their relationship to psychological distress and homesickness in college freshmen. *Anxiety, Stress, and Coping*, *16*, 155–166.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, *42*, 155–162.
- 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*, 645–660.
- Blimling, G. S., & Miltenberg, L. J. (1981). *The resident assistant: Working with college students in residence halls* (2nd ed.). Dubuque, IA: Kendall/Hunt.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*, 267–283.
- Cohen, S., Tyrell, D. A. J., & Smith, A. P. (1993). Negative life events, perceived stress, negative affect, and susceptibility to the common cold. *Journal of Personality and Social Psychology*, *64*, 131–140.
- Cohen, S., & Williamson, G. M. (1991). Stress and infectious disease in humans. *Psychological Bulletin*, *109*, 5–24.
- Corcoran, K., & Fischer, J. (2000). *Measures for clinical practice: A sourcebook* (3rd ed., Vol. 2). Adults. New York: The Free Press.
- Creer, T. L. (1997). *Psychology of adjustment: An applied approach*. Englewood Cliffs, NJ: Prentice Hall.
- Dohrenwend, B. S., Dohrenwend, B. P., Dodson, M., & Shrout, P. E. (1984). Symptoms, hassles, social supports, and life events: Problems of confounded measures. *Journal of Abnormal Psychology*, *93*, 222–230.

- Dressler, W. W. (1991). *Stress and adaptation in the context of culture: Depression in a southern black community*. Albany, NY: State University of New York Press.
- Fisher, S., Frazer, N., & Murray, K. (1986). Homesickness and health in boarding school children. *Journal of Environmental Psychology, 6*, 35–47.
- Fisher, S., & Hood, B. M. (1987). The stress of the transition to university: A longitudinal study of psychological disturbance, absent-mindedness and vulnerability to homesickness. *British Journal of Psychology, 78*, 425–411.
- Grochowski, J. R., & McCubbin, H. I. (1991). YA-FILES: Young adult family inventory of life events and strains. In H. I. McCubbin & A. I. Thompson (Eds.), *Family assessment inventories for research and practice* (pp. 112–123). Madison: The University of Wisconsin-Madison.
- Lapsley, D. K., Rice, K. G., & Shadid, G. E. (1989). Psychological separation and adjustment to college. *Journal of Counseling Psychology, 36*, 286–294.
- Lazarus, R. S. (1976). *Patterns of adjustment* (3rd ed.). New York: McGraw-Hill.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lopez, F. G., & Gormley, B. (2002). Stability and change in adult attachment style over the first-year college transition: Relations to self-confidence, coping, and distress patterns. *Journal of Counseling Psychology, 49*, 355–364.
- Margolis, G. (1981). Moving away: Perspectives on counseling anxious freshmen. *Adolescence, 16*, 633–640.
- McNamara, S. (2000). *Stress in young people: What's new and what can we do?* New York: Continuum.
- Mikhail, A. (1985). Stress: A psychophysiological conception. In A. Monat & R. S. Lazarus (Eds.), *Stress and coping: An anthology* (pp. 30–39). New York: Columbia University Press.
- Nezu, A. M., & Nezu, C. M. (1987). Psychological distress, problem-solving, and coping reactions: Sex role differences. *Sex Roles, 16*, 205–214.
- Quinn, B. P. (1997). *The depression sourcebook*. Los Angeles: Lowell House.
- Patterson, J. M., & McCubbin, H. I. (1984). Gender roles and coping. *Journal of Marriage and the Family, 46*, 95–104.
- Renk, K., & Creasey, G. L. (2003). The relationship of gender, gender identity, and coping strategies in late adolescents. *Journal of Adolescence, 26*, 159–168.
- Rich, A. R., & Bonner, R. L. (1987). Interpersonal moderators of depression among college students. *Journal of College Student Personnel, 28*, 337–342.
- Rich, A. R., & Scovel, M. (1987). Causes of depression in college students: A cross-lagged panel correlation analysis. *Psychological Reports, 60*, 27–30.
- Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist, 41*, 813–819.
- Sarason, I. G., & Sarason, B. R. (1999). *Abnormal psychology: The problem of maladaptive behavior* (9th ed.). Upper Saddle River, NJ: Prentice Hall.
- Selye, H. (1936). A syndrome produced by diverse nocuous agents. *Nature, 138*, 32.
- Simons, J. A., Kalichman, S., & Santrock, J. W. (1994). *Human adjustment*. Madison, WI: Brown & Benchmark.
- Snyder, C. R. (Ed.). (1999). *Coping: The psychology of what works*. New York: Oxford University Press.
- Spence, J. T. (1993). Gender-related traits and gender ideology: Evidence for a multifactorial theory. *Journal of Personality and Social Psychology, 64*, 624–635.
- Steptoe, A. (1991). The links between stress and illness. *Journal of Psychosomatic Medicine, 35*, 633–644.
- Terry, D. J. (1991). Coping resources and situational appraisals as predictors of coping behavior. *Personality and Individual Differences, 12*, 1031–1047.