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A PRINCIPAL COMPONENTS ANALYSIS AND VALIDATION OF THE COPING WITH THE COLLEGE ENVIRONMENT SCALE (CWCES)

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ABSTRACT

The present study describes the development and initial validation of the Coping with the College Environment Scale (CWCES). Participants included 433 college students who took an online survey. Principal Components Analysis (PCA) revealed six coping strategies: planning and self-management, seeking support from institutional resources, escaping through substance (pills, alcohol, tobacco, and marijuana) use, seeking support from friends, spirituality, and seeking support from family. Together, these components accounted for 57.12% of the variance. Validation of the CWCES included examining gender differences on the components and correlations between the six components and sense of belonging measures. College students experience considerable stress. Colleges can use information from the CWCES to help students cope with stress more effectively and possibly improve student retention.

Stress is a growing problem on college campuses. The 2003 Survey of National Counseling Center Directors revealed that 63.1% of directors expressed concern over an increased need for services among college students (International Association of Counseling Services, 2003; see also Sax, 1997). While stress is only one reason that students frequent college counseling centers, a recent study found

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that a majority who sought counseling reported problems with stress and anxiety (Benton, Robertson, Tseng, Newton, & Benton, 2003). Even among non-clinical samples of students, stress related to college life is common (Park, Armeli, & Tennen, 2004; Ptacek, Smith, & Zanas, 1992). Moreover, students often report that problems related to college are the most negative events they experience (Park et al., 2004).

A number of studies have identified sources of stress for college students that relate specifically to the college environment (e.g., Dill & Henley, 1998; Ross, Niebling, & Heckert, 1999; Towbes & Cohen, 1996). For example, students may experience stress due to academic concerns (e.g., getting poor grades, choosing a major) or interpersonal relationships (e.g., getting along with roommates). However, few studies of college students have examined how they cope with stress related to college. As Long (1990) asserted, both the environment and the importance of a stressor work together to determine how people cope.

The purpose of the present study is to investigate how students cope with the demands of the college environment. Understanding how students cope with college-initiated stress could provide useful information to college counseling centers and others who work with these students. After describing the coping process, this review focuses on gender differences in coping and the need to belong in college. Details about the development and initial validation of the Coping with the College Environment Scale (CWCES) follow.

COPING AS EMOTIONAL REGULATION

Individuals experience stress when faced with mental or physical demands (Selye, 1991). Researchers have associated stress with mental and physical problems, including insomnia (Morin, Rodrigue, & Ivers, 2003), physical symptoms and negative affect (Kim & Seidlitz, 2002), anxiety, depression, and loss of control (Towbes & Cohen, 1996), and hopelessness (Elliott & Frude, 2001). College students who experience high levels of stress are more likely to report difficulty adjusting to college (Aspinwall & Taylor, 1992; Chemers, Hu, & Garcia, 2001) and lower levels of satisfaction with their lives (Coffman & Gilligan, 2002-2003). Some research suggests that high levels of stress are related to lower grades (Struthers, Perry, & Menec, 2000), as well as students' decisions to leave college (Chemers et al., 2001; Gloria & Kurpius, 2001).

The transactional model of coping (Folkman & Lazarus, 1988) portrays a process in which coping helps individuals manage the emotional reaction they have in response to stress. In primary appraisal, individuals determine whether a stressor is harmful, threatening, or challenging. In conditions of harm or threat, a negative event has occurred or is expected to occur. Appraisals of challenge signify potentially positive outcomes of the encounter with a stressor. In secondary appraisal, individuals evaluate the resources available to cope. The coping response that follows is designed to change the relationship an individual

has with a stressor. Folkman and Lazarus report that individuals may use problem-focused coping (i.e., they attempt to change their relationship with the stressor) or emotion-focused coping (i.e., they try to change their attention or the meaning of a stressor). Other researchers have expanded Folkman and Lazarus' types of coping to include avoidance-oriented coping, which describes forms of disengagement such as drinking, seeking diversion, and mentally disengaging from stress (Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1994). In contrast to the adaptive nature of problem- and emotion-focused coping, Folkman and Lazarus (1991) suggested that certain types of avoidance coping (wishful thinking, eating, drinking, smoking, drugs, and sleeping) were usually maladaptive. Others have found that the use of avoidance coping is associated with high levels of stress (Kim & Seidlitz, 2002; Lopez, Mauricio, Gormley, Simko, & Berger, 2001).

Hussong's (2003) research on college student drinking illustrates the importance of considering the source of stress By examining types of stress from four domains (e.g., life management, social relationships, school, and general social adjustment), she found that coping style was related to student drinking. For example, men with high school-related stress who were also high in problem-focused coping drank less than men low in problem-focused coping and women. In contrast, men with high relationship stress who were also high in problem-focused coping drank more compared to men low in problem-focused coping and women. These findings provide further support for the development of a coping assessment specific to the college environment.

GENDER DIFFERENCES IN COPING

Gender differences found in coping may be partially due to differences in the appraisal of stressors. In a recent study, Day and Livingstone (2003) found that women reported more stress than men in response to a series of controlled scenarios. Participants were provided with five scenarios that described stressful situations related to school, family, friends, work, and relationships. In the school, friend, and work scenarios, women reported higher levels of stress than did men. Men and women reported equal levels of stress for the family and relationships scenarios. Similarly, Ptacek et al. (1992) found that women reported significantly more stress than men. They also found that men were more likely to appraise events as challenging (rather than threatening or harmful).

Research on gender differences has shown that women are more likely than men to report emotion-focused coping (Carver et al., 1989; Endler & Parker, 1994; Matud, 2004), while men report more problem-focused coping (Endler & Parker, 1994; Ptacek et al., 1992). Research on avoidance coping is mixed. Men tend to use avoidance coping by drinking or using drugs (Carver et al., 1989; Sheu & Sedlacek, 2004), while women are more likely to use avoidance coping

that involves distraction (e.g., watching television or thinking about something else; Baker, 2003; Endler & Parker, 1994).

COPING AND THE NEED TO BELONG IN COLLEGE

Tinto's (1993) model of college student departure (i.e., drop out) views college departure as a withdrawal from academic and social communities Although college students experience considerable stress, few studies have examined stress as it relates to student membership in academic and social communities. In one of the few empirical studies to address this issue, Torres and Solberg (2001) found that among college students, stress was negatively correlated with social integration. In addition, there is a need for a coping scale that includes dimensions that are relevant to the stress that students typically experience. For example, homesickness is an issue for students, so their ability to make new friends and maintain communication with their families may be particularly relevant.

Student departure can be conceived of as a form of avoidance coping. In some cases, college drop-out may reflect an individual's inability to effectively cope with the demands of college. In contrast, students who feel connected with others report lower stress (Lee, Keough, & Sexton, 2002; Torres & Solberg, 2001). Their involvement in academic and social communities should be reflected in their own sense of belonging, which includes the ability to connect with others and the availability of social support networks. For students, sense of belonging includes their perceived support of peers and faculty, classroom comfort, and isolation (Hoffman, Richmond, Morrow, & Salomone, 2002-2003). In fact, students with a higher sense of belonging report greater plans to remain in college (Berger, 1997, Gerdes & Mallinckrodt, 1994). These students may be better equipped to manage the demands of college compared to peers who do not feel involved in the academic and social communities of college.

HYPOTHESES

After performing a principal components analysis (PCA) on student-identified methods of coping, validation of the CWCES was carried out by testing hypotheses based on proposed gender differences and correlations between the components of the CWCES and sense of belonging. Specifically, we predicted that men would use more problem-focused coping, women would use more emotion-focused coping, and men would report more avoidance coping. Next, in order to test for convergent validity, we examined how coping related to measures of sense of belonging. We predicted that problem- and emotion-focused coping would be positively correlated with peer support, faculty support, and classroom comfort, and negatively correlated with perceived isolation. We also hypothesized that avoidance coping would be negatively correlated with peer support, faculty support, and classroom comfort, and positively correlated with perceived isolation.

METHOD

Participants

Four hundred and fifty-two college students from a public university in the southeastern United States constituted the sample. Nineteen participants were excluded from the analyses, leaving a sample of 433 students with a mean age of 21.67 and a range of 18 to 52. Of these participants, 23.1% were male and 76.9% were female. Participants reported their race as White (57%), Black (28.9%), Asian-American or Pacific Islander (6.7%), Alaskan Native or Native American (.2%), and other races (6%), and 6% of participants were Hispanic. Participants indicated their year in school as freshman (28.2%), sophomore (20.6%), junior (25.6%), and senior (25.6%).

Materials

An anonymous online questionnaire was administered to assess coping and sense of belonging, along with demographic characteristics (i.e., age, gender, race/ethnicity, year in school, living arrangements, and GPA).

Coping with the College Environment Scale (CWCES)

One hundred and forty-four undergraduate students were asked to respond to two questions: List five things about the college environment that stress you out, and list five things that you do to help you deal with this stress. Responses to the second item were condensed and duplicate items were removed. The resulting 62-item scale was administered to the participants in the present study. Participants rated how often they used the particular coping technique to deal with the stress of college life on a 4-point scale ranging from 0 (never) to 3 (often).

Sense of Belonging Scale—Revised (Hoffman et al., 2002-2003)

This measure contained 26 items used to assess sense of belonging in a college environment. The 4-factor scale included eight statements on perceived peer support (e.g., "If I miss class, I know students who I could get notes from;" $\alpha = .91$); four statements that addressed perceived classroom comfort (e.g., "I feel comfortable contributing to class discussions;" $\alpha = .94$); four statements on perceived isolation (e.g., "I rarely talk to other students in my classes," $\alpha = 83$); and 10 statements that assessed perceived faculty support (e.g., "I feel comfortable seeking help from a teacher before or after class;" $\alpha = .86$). The items were scored on a 5-point scale, from 1 (completely untrue) to 5 (completely true). Scores for each factor were determined by calculating item means.

Procedure

The college's Human Subjects Committee review board approved this study. Participants were solicited to take an anonymous online survey in return for extra credit. The survey Website contained information about the purpose of the study, risks and benefits, confidentiality, and their right to withdraw at any time.

RESULTS

Before performing the PCA, missing data and outliers were examined. Missing data (< 5%) were replaced with the item mean. Calculation of *z*-scores revealed 43 univariate outliers, which were made less deviant by adjusting the values to be .5 higher or lower than the next highest/lowest score. This method fixed the outliers and maintained a difference between the outlier and other values. Seventeen multivariate outliers were deleted, and two participants were excluded because they were not undergraduates and therefore did not meet inclusion criteria for the study. The final sample included 433 participants.

Principal Components Analysis (PCA)

Measures of sampling adequacy revealed no issues with the factorability of the correlation matrix. Bartlett's test of sphericity was significant, $\chi^2(1891) = 10{,}706.96$, $p < .001$, and the Kaiser-Meyer-Olkin measure of sampling adequacy was .83, considered excellent (Pett, Lackey, & Sullivan, 2003). In addition, item measures of sampling adequacy ranged between .70 and .89, further confirming the factorability of *R.*

Examination of the Scree plot suggested a 5-7 component solution. These three solutions were tested, and both the 6- and 7-item models were interpretable. However, one of the components was unreliable for both models, so these items were deleted.

We selected a 6-component solution with varimax rotation. Varimax rotation was chosen because it aids interpretation when the components are to be used as dependent variables (Tabachnick & Fidell, 2001). Complex loading items (i.e., those that loaded on more than on component) and items that did not load > .32 on any of the components were deleted. The remaining items again underwent PCA, and items with low or complex loadings were deleted. This procedure was repeated until there were 31 items that loaded at least .45 on one of the components, with no complex loadings. See Table 1 for loadings and scale items.

The first component, *planning and self-management* ($\alpha = .82$), contained eight items and accounted for 12.26% of the variance. Reflected in items like "I try to do a better job managing my time" and "I try to get more organized," this component revealed ways in which students could plan ahead and manage their time.

Table 1. Principal Components Analysis with Varimax Rotation and Coefficient Alphas

Item	Loading
Component 1: Planning and self-management (α = .82)	
I try to do a better job managing my time.	.70
I try not to procrastinate when assignments are due.	.69
I try to get more organized.	.72
I try to get enough sleep.	.51
I try to prioritize my assignments.	.71
I try to keep a positive outlook.	.60
I focus on the future.	.68
I try to get started on assignments early.	.65
Component 2: Seek support from institutional resources (α = .82)	
I go to an on-campus event (e.g., lecture, meeting) with friends.	.67
I go talk with a school counselor.	.54
I go talk with my professor.	.65
I join a study group.	.62
I get involved with school activities.	.68
I ask my classmates for help.	.74
I ask my professors for help.	.71
Component 3: Escape through substance use (α = .77)	
I take a pill to relax me.	.67
I go out and drink.	.69
I smoke a cigarette.	.71
I drink alone at home.	.61
I go to a bar with friends.	.70
I smoke marijuana.	.60
Component 4: Seek support of friends (α = .78)	
I hang out with my friends.	.83
I talk with a friend on the phone.	.75
I talk with my friends about what is stressing me out.	.73
I go out and party with friends.	.63
Component 5: Spirituality (α = .87)	
I read the Bible.	.87
I pray.	.83
I go to church/temple.	.86
Component 6: Seek support of family (α = .71)	
I spend time with my family.	.82
I talk with my family about what is stressing me out.	.83
I go away and visit family.	.61

The second component, *seeking support from institutional resources* ($\alpha = .82$), contained seven items and accounted for 11.33% of the variance. This component included items that represented support that students could get from institutional resources, such as faculty members or school activities. Sample items include "I go talk with my professor" and "I go to an on-campus event (e.g., lecture, meeting) with friends."

The third component, *escaping through substance use* ($\alpha = .77$) included six items and accounted for 9.63% of the variance. Items represented ways in which students used substances (pills, alcohol, tobacco, and marijuana) to cope with stress. Sample items include "I go out and drink" and "I smoke marijuana."

The fourth component, *seeking support from friends* ($\alpha = .77$), included four items and accounted for 9.28% of the variance. These items included coping methods in which students turned to their friends. Representative items are "I hang out with my friends" and "I talk with my friends about what is stressing me out."

The fifth component, *spirituality* ($\alpha = .87$), contained three items and accounted for 8.21% of the variance. Sample items are "I pray" and "I go to church/temple."

The sixth component, *seeking support from family* ($\alpha = .71$), included three items and accounted for 6.43% of the variance. Students reported visiting, talking to, and spending time with family members as a way of coping with stress. Sample items include "I spend time with my family" and "I talk with my family about what is stressing me out."

Overall, the rotated six-component solution of the CWCES accounted for 57.12% of the variance, and the entire scale had an internal consistency of .83. For the purpose of testing hypotheses based on gender differences and sense of belonging, planning, and self-management and seeking support from institutional resources were categorized as problem-focused strategies. Emotion-focused strategies included spirituality, seeking family support, and seeking support from friends, and avoidance coping was indicated by escaping through substance use.

Gender Differences

Correlations among the six components ranged between –.22 and .38 and confirmed that MANOVA was an appropriate statistic to test the hypotheses that men and women would use different coping strategies. Each of the six components served as dependent variables. The multivariate test was significant, $F(6, 426) = 5.68$, $p < .001$, $\lambda = .93$, partial $\eta^2 = .07$. First, men were expected to use more problem-focused coping strategies than women. Women ($M = 2.22$, $SD = .45$) reported using planning and self-management more often than did men ($M = 2.07$, $SD = .48$), $F(1, 431) = 9.08$, $p < .01$, partial $\eta^2 = .02$. Men ($M = 1.10$, $SD = .62$) reported seeking support from institutional resources more often than did women ($M = 94$, $SD = .60$), $F(1, 431) = 5.42$, $p < .05$, partial $\eta^2 = .01$. Next, women were expected to use more emotion-focused coping strategies. There were no gender differences in the use of these strategies. Men ($M = 1.62$, $SD = .70$) did not differ

from women ($M = 1.72$, $SD = .73$), $F(1, 431) = 1.40$, *n.s.,* on seeking social support from family. Nor did men ($M = 1.03$, $SD = .93$) and women ($M = 1.17$, $SD = .97$) differ on their reported use of spirituality, $F(1, 431) = 1.62$, *n.s.* For seeking the social support of friends, men ($M = 2.21$, $SD = .72$) and women ($M = 2.30$, $SD = .62$) reported similar use, $F(1, 431) = 1.43$, *n.s.* Finally, men were expected to use more avoidance coping. As hypothesized, men ($M = .79$, $SD = .66$) reported using avoidance coping more often than did women ($M = .58$, $SD = .61$), $F(1, 431) = 8.46$, $p < .01$, partial $\eta^2 = .02$.

Correlations with Sense of Belonging

With a significance level of at least $p < .05$, problem-focused coping strategies (i.e., planning and self-management and seeking support from institutional resources) were positively correlated with peer support, faculty support, and classroom comfort, and negatively correlated with perceived isolation. Students who reported higher use of planning and self-management and seeking support from institutional resources reported more peer support, faculty support, and classroom comfort, and less perceived isolation. Emotion-focused coping strategies (i.e., seeking support from friends, spirituality, and seeking support from family) were positively correlated with peer support and faculty support, uncorrelated with classroom comfort, and negatively correlated with perceived isolation. Students who reported higher use of emotion-focused coping strategies reported higher peer support and faculty support, and lower perceived isolation. Escape through substance use was not significantly correlated with any of the sense of belonging measures. See Table 2 for correlations among the sense of belonging and coping components. Tables 3 provides means and standard deviations by gender for these variables.

DISCUSSION

This study examined the component structure of student-identified methods of coping with the college environment. Hypotheses related to gender differences and the relationship of the components to sense of belonging are discussed below.

We hypothesized that there would be gender differences in coping. Specifically, men were expected to use more problem-focused coping (i.e., seeking support from institutional resources and planning and self-management). This hypothesis was partially supported. Men reported seeking support from institutional resources more often than did women. This finding supports previous literature that indicates that men report more problem-focused coping (Endler & Parker, 1994; Ptacek et al., 1992). However, contrary to the stated hypothesis, women reported more planning and self-management than did men. It is possible that the planning and self-management component reflects good study habits. To our knowledge, research has not examined the study habits of college men and

Table 2. Correlations among Types of Coping and Sense of Belonging Variables

Measure	SM	IR	FAM	FRN	SPI	SU	PS	FS	COM	PI
1. SM	—									
2. IR	.25***	—								
3. FAM	.24***	.33***	—							
4. FRN	.15**	.38***	.27***	—						
5. SPI	.18***	.28***	.20***	.02	—					
6. SU	.09	.15**	.07	.22***	.22***	—				
7. PS	.21***	.43***	.15***	.30***	.12***	.01	—			
8. FS	.23***	.24***	.18***	.14**	.11*	.02	.28***	—		
9. COM	.15**	.19***	.07	.09	.03	.02	.28***	.37***	—	
10. PI	−.09*	−.29***	−.15***	−.20***	−.13**	.00	−.60***	−.23***	−.24***	—

Note: SM = planning and self-management; IR = seek support from institutional resources; FAM = seek support from family; FRN = seek support from friends; SPI = spirituality; SU = escape through substance use; PS = peer support; FS = faculty support; COM = classroom comfort; PI = perceived isolation.

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

Table 3. Means and Standard Deviations for Coping and Sense of Belonging Variables

	Male (n = 100)		Female (n = 333)	
Measure	*M*	*SD*	*M*	*SD*
SM	2.07	.48	2.22	.45
IR	1.10	.62	.94	.60
FAM	1.62	.70	1.72	.73
FRN	2.21	.72	2.30	.62
SPI	1.10	.62	1.17	.97
SU	.79	.66	.58	.61
PS	3.24	1.02	3.30	1.01
FS	3.40	.57	3.35	.72
COM	3.42	1.07	3.34	1.17
PI	3.08	.96	2.96	.96

Note: SM = planning and self-management; IR = seek support from institutional resources; FAM = seek support from family; FRN = seek support from friends; SPI = spirituality; SU = escape through substance use; PS = peer support; FS = faculty support; COM = classroom comfort; PI = perceived isolation.

women. However, Aluja and Branch (2004) reported that between boys and girls (with a mean age of 13), girls had better study habits than did boys. It is also possible that different demographics (e.g., GPA, age, or time spent working or caring for family) might explain the difference in planning and self-management between men and women. However, post hoc ANOVAs revealed no differences between men and women on GPA or age. Although not collected in the present study, information about job and family responsibilities might reveal information that addresses whether women are more likely to hold jobs or have family responsibilities. If this is the case, they may be required to plan their school and study time more carefully.

Next, we hypothesized that women would use more emotion-focused coping (i.e., spirituality, seeking support of friends, and seeking support of family). This hypothesis was not supported. Men and women reported equal use of emotion-focused coping. O'Connor, Cobb, and O'Connor (2003) found differences in reported religiosity between men and women, with women reporting higher religiosity. The measure used in their research assessed attitudes, rather than behaviors. Thus, men and women may not differ on spiritual practices. Likewise, men and women reported equal use of seeking social support from friends and seeking social support from family. Carver et al. (1989) distinguished between

instrumental and emotional social support. Instrumental social support includes requesting the help of others. Carver et al. categorized instrumental support as a problem-focused coping method. In contrast, emotion-focused social support involves seeking the help of others in order to discuss the problem and gain emotional support. The current study did not distinguish between instrumental and emotional social support. Items on the CWCES designed to assess social support, such as "I talk with my friends about what is stressing me out," could reflect instrumental or emotional support. Some individuals might talk to others in order to get help, whereas others might just want to express their feelings.

Next, the hypothesis that men would use more avoidance coping (i.e., escaping through substance use) was supported. Men reported more overall use of substances (i.e., pills, alcohol, tobacco, and marijuana) than did women. This finding was expected based on literature that has shown that men are more likely to cope through avoidance by the use of substances (e.g., Carver et al., 1989; Sheu & Sedlacek, 2004). In general, men tend to drink more than do women (Kahler, Read, Wood, & Palfai, 2003). As a coping mechanism, escaping through substance use was not positively correlated with sense of belonging, as problem- and emotion-focused coping were in this study.

We assessed convergent validity with hypotheses concerning the relationship of coping and sense of belonging. First, the hypothesis that problem-focused coping would be positively related to peer support, faculty support, and classroom comfort, and negatively related to perceived isolation was supported. Second, partial support was found for the hypothesis that emotion-focused coping would be related to sense of belonging in the same way as problem-focused coping. Emotion-focused coping was related in anticipated ways to peer and faculty support and perceived isolation; however, the three emotion-focused components (spirituality, seeking support of friends, and seeking support from family) were unrelated to classroom comfort. Classroom comfort, which refers to how comfortable students feel participating in class, may be unrelated to these emotion-focused strategies because they would normally occur outside the classroom. For example, if people use spirituality to cope, they will probably do most of their praying or reading the Bible outside the classroom. Likewise, seeking support of friends and family will not generally occur in the classroom. It is also possible that students do not turn to their friends and family about issues related to classroom comfort. In contrast, the problem-focused coping strategies, seeking support from institutional resources (such as their professors) and planning and self-management, are likely to occur in the classroom. Third, avoidance coping was hypothesized to be related to the sense of belonging measures in negative ways. This hypothesis was not supported. Using alcohol and other substances was not related to peer support, faculty support, classroom comfort, or perceived isolation. Students who reported higher escape through substance use were also more likely to report high social support from friends and support from institutional resources. The social aspects of substance use no doubt contribute to this

finding; however, these findings highlight the difficulty in identifying students who use maladaptive coping.

Limitations and Strengths of Present Study

One limitation of this research was that the initial items may have over-represented positive ways of coping. During item development, participants were asked to list five ways they coped with college stress. Ways of coping that came to mind may have been ways that they believed to be effective. Another issue is that one of the components, which contained heterogeneous distraction activities (e.g., watching TV, going shopping, and surfing the Internet), was unreliable and was dropped. In the future, devising more general avoidance items will provide additional information about how college students cope through avoidance. In addition, this will be necessary to gain more information about the maladaptive coping of women. Finally, it may have been helpful to provide students with a limited definition of the college environment for them to consider while answering the questions on how they coped.

On the other hand, this study also had several strengths. A methodological strength was that theoretical backgrounds from coping and sense of belonging enabled the testing of specific hypotheses to provide support for the derived components. In addition, this study is one of few that examines coping as it relates specifically to college. Jackson, Sher, Gotham, and Wood's (2001) research on high-risk drinking has shown that while some students decrease their drinking as they get older, there are others (most notably men and individuals from families with alcohol problems) who do not. College may be an ideal time to intervene with these students. This study also provides information about gender differences and the relationship of gender and escape through substance use.

Implications of Study

Although escaping through substance use was not a common coping technique among students, it is important to note that the negative effects of excess consumption do not just affect the individual who drinks too much. The National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2002) identified numerous consequences that extend beyond the individual, including violence toward others, high-risk sexual behavior, vandalism, and noise. Understanding how students manage the stress of college, particularly in negative ways, is important because it affects not only them, but the larger college community. In addition, future research could explore adaptive coping in college. Information about adaptive coping can inform individuals about what they can do to cope more effectively. The relationship between college stress and different coping techniques could reveal whether some methods of coping are more effective than others. Variables such as student persistence (i.e., whether or not students remain in college) would also provide a view into whether students who leave college

experience different stress or use different coping strategies than those who remain. High-risk populations, such as problem drinkers and drug users, might be studied in order to learn more about their college experiences. Longitudinal research that investigates how student stress changes throughout the college years could help college counseling centers address the specific concerns of different years of students. Ultimately, such research could help colleges appropriately counsel students and help make the transition to college less stressful for students.

Conclusions

In the present study, the CWCES differentiated among problem-focused, emotion-focused, and avoidance coping. The measure demonstrated appropriate psychometric properties, exhibiting both reliability and convergent validity. Finally, the CWCES fills a gap in the research. College students face a great deal of stress related to college. How they cope with this stress may have important implications both in terms of how they feel about their college experience and whether they remain in college.

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