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STRESS, COPING, AND SUCCESS AMONG GRADUATE STUDENTS IN CLINICAL PSYCHOLOGY[1]

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Summary.—Research has indicated that coping styles and social support are moderating variables in the relationship between stress and distress. Few studies, however, have examined the relationship between these variables and the relative health and success of graduate students in clinical psychology. We administered measures of stress, psychological health, social support, and coping styles to 53 doctoral students in clinical psychology. Current grade point averages were used as a measure of academic success. We hypothesized that more successful students would likely be healthier and report less stress, more social support, and utilization of more positive and less negative coping styles. Results generally supported the hypothesis. Unexpected findings were that more successful students were likely to be women and to report increased use of focus on and venting of emotion as a coping style, increased utilization of medical care, and increased stress regarding scholastic coursework.

Graduate school is often experienced as a time of increased demands, expectations, and stress (Toews, Lockyer, Dobson, & Brownell, 1993). It is also a time of increased risk for the development of physical and psychological health problems (Mallinckrodt, Leong, & Kralj, 1989). Not everyone performs well in this rigorous training environment. What does it take to succeed in graduate school?

How people cope with a stressful situation such as graduate school appears to mediate outcome. Research indicates that style of coping is one moderating influence in the stress-distress relationship (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Distress often occurs if "environmental demands tax or exceed the adaptive capacity of an organism" (Cohen, Kessler, & Gordon, 1995, p. 3) to cope through "cognitive and behavioral efforts to manage the internal and external demands of the person-environment transaction" (Folkman, Lazarus, Gruen, & DeLongis, 1986, p. 572). Some coping strategies, such as positive reappraisal, appear to be generally helpful across a range of situations. Others, such as problem-focused coping, appear influenced by situational context (Folkman, Lazarus, Gruen, & DeLongis, 1986). Emotion-focused coping has received mixed reviews (Carver, Scheier, & Weintraub, 1989), and it appears that most published emotion-focused coping scales are confounded with psychopathology, leading to artificially low effectiveness scores (Stanton, Danoff-Burg, Cameron, & Ellis, 1994).

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Social support is also relevant to the stress and distress relation. In general, strong social support is associated with low to moderate effects on the relationship between stressors and distress (Turner, Frankel, & Levin, 1983). The stress of both major events and daily hassles is positively correlated with physical and psychological illness, with daily hassles demonstrating the stronger correlation (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Burks & Martin, 1985). Depue and Monroe (1986) noted that the correlation between stressors and illness is often low but suggested that it is weakened by lack of differentiation in research between types and duration of illnesses.

A review of the literature yielded very few studies that focused specifically on success, stress, distress, coping, and health among graduate students in clinical psychology. Based on the literature review across varied graduate settings, multiple factors were considered in this study to examine interactions among variables thought to be related to success in graduate school. We hypothesized that more successful graduate students in clinical psychology would be likely to report less stress, less distress, greater health, greater social support, and utilization of more positive and fewer negative coping strategies than would less successful graduate students.

Method

Participants

The sampling frame for this study included all current graduate students enrolled in coursework in the clinical psychology doctoral program at a small university in the northwest. Of 61 eligible graduate students, 53 completed and returned the survey in time for inclusion in the study, an 87% response rate. There were 26 men and 26 women. One subject did not indicate sex. The mean age of participants was 32 yr., with ages ranging from 22 to 49 years. The 13% who did not respond consisted of students who were absent that day, students who were enrolled but not attending classes that term, and students who chose not to complete the survey.

Measures

Grade point average.—Current grade point averages reported in university records were used as a measure of academic success.

Demographic/Stress Questionnaire.—This questionnaire, developed by the authors, was used to assess each subject's perceived stressors and enhancers in various areas of graduate school life, including financial situation, time management and availability, relationships with friends, peers, and faculty, academic coursework, clinical work, spirituality, and daily hassles. Items were rated on a scale of 1 (great help) to 6 (great stress). Also included were questions about age, sex, ethnicity, health status, marital status, living arrangements, and number of hours invested in school, practicum, and work.

General Health Questionnaire.—The General Health Questionnaire–28 is a self-administered inventory of 28 items designed to detect psychiatric disorders among respondents in community settings. The format of the North American Version was used in this study. Respondents rated themselves for each item on a 4-point rating scale, indicating whether the symptom or item was experienced as "better than usual," "same as usual," "worse than usual," or "much worse than usual" (Goldberg, 1978). Only the total score was used in this study. Goldberg (1978) reported high validity of the General Health Questionnaire–28 over multiple studies, with a median specificity of .90 and median sensitivity of .86. Test-retest reliability coefficients ranged from .51 to .90.

Multidimensional Support Scale.—The Multidimensional Support Scale is a 16-item self-report scale measuring both the availability and perceived adequacy of social support from confidants, peers, and experts. In this study, these three sources of social support were labeled as family and close friends, peers in graduate school, and professors, advisors, mentors, and supervisors. Coefficients alpha of internal reliability for the six subscales have characteristically been .75 or greater (Winefield, Winefield, & Tiggemann, 1992).

COPE.—The COPE is a 60-item coping scale assessing 15 coping strategies or styles, each of which has a possible range from 4 (each of the four items in the scale answered " I usually don't do this at all") to 16 (each of the four items in the scale answered "I usually do this a lot"). Active coping, planning, seeking instrumental social support, seeking emotional social support, suppression of competing activities, religious coping, positive reinterpretation and growth, restraint coping, acceptance, and humor are considered positive coping strategies. Denial, mental or behavioral disengagement, and alcohol/drug use are considered negative coping strategies. The coping strategy of focus on and venting emotions occupies an ambiguous status in situations requiring active coping (Carver, *et al.*, 1989). Coefficients alpha computed for each scale ranged from .45 to .92. Test-retest reliabilities ranged from .46 to .86 (Carver, *et al.*, 1989).

Procedure

Participants were invited through departmental e-mail to complete a questionnaire packet and return it to administrative staff as part of a health-day didactic session. Staff then posted current grade point averages to each completed packet and removed the signed informed consents to protect participants' identity before returning the questionnaire packets to the authors for data analysis.

Results

Factors associated with academic success are examined first. Second, factors correlated with stress and distress are explored. Third, coping strate-

gies are examined. Sex differences are noted throughout but are also specifically addressed in the final section.

Academic Success

Pearson correlations indicated (see Table 1) that graduate students with higher grade point averages were likely to utilize coping styles characterized by less denial, more religious coping, more focus on and venting emotions, and more seeking of emotional social support. Academically successful students were likely to report a greater number of surgeries over a lifetime as well as more illnesses and trips to the doctor over the past two years. Students with higher grade point averages were also likely to report less stress regarding their spirituality but more stress regarding scholastic coursework. Finally, successful students were likely to be women and to report greater support from family and close friends.

TABLE 1
PEARSON INTERCORRELATIONS BETWEEN GRADE POINT AVERAGE AND OTHER VARIABLES

Variable	r^*	N
Denial Coping	−.42	51
Sex (Male = 1, Female = 2)	.37	52
Coursework Stress	.36	53
Religious Coping	.35	52
Spiritual Stress	−.34	53
Focus/Venting of Emotions	.33	52
Surgery (Yes = 1, No = 2)	.33	52
Support of Family and Close Friends	.32	52
Seeking Emotional Social Support	.28	51
Illness/Doctor Visits (Yes = 1, No = 2)	.28	53

$^*p < .05$.

A multiple regression analysis was utilized to identify which chosen factors, based on the literature review, contribute most to higher grade point averages among clinical psychology graduate students. Sex, religious coping, stress in relationships with peers, and seeking of instrumental social support significantly contributed to grade point average (see Table 2). Sex accounted for nearly 50% of the variance. Additionally, a one-way analysis of variance indicated that the women ($M = 3.7$, $SD = .3$) had significantly higher ($F_{1,50} = 7.92$, $p < .007$) mean grade point averages than the men ($M = 3.5$, $SD = .3$).

Stress and Distress

Stress factors were measured using the Demographic/Stress Questionnaire which was based on stressors commonly reported in the literature. The total score from the General Health Questionnaire was utilized as a measure of psychological health or distress.

TABLE 2
FACTORS THAT SIGNIFICANTLY CONTRIBUTE TO GRADE POINT AVERAGE

	Regression Equation		
Factors	GPA = 3.306 + .366 (sex) + .040 (religious coping) + .167 (peer-relationship stress) + −.033 (seeking instrumental support) + .00093 (GRE-Verbal) + .0003 (GRE-Total)		
Analysis of Variance	$F = 147.50$, $p < .001$		
R^2	.99		
	Steps		
	1	2	3
Variable Added	sex	religious coping	peer-relationship stress
R^2	.493	.681	.900
	4	5	6
Variable Added	seeking instrumental support	GRE-Verbal	GRE-Total
R^2	.958	.978	.989

Stressors.—Multiple stressors/enhancers were rated by participants according to whether each item was a source of stress and worry, or alternatively, a source of help and a moderation of stress. The highest stressors were scholastic coursework, dissertation work, and financial situation followed by internship expectations and application process, practicum placement, daily hassles, time management and availability, and work with clients. As reported earlier, stress regarding scholastic coursework was also significantly increased for those graduate students with higher grade point averages. Factors rated by participants as most helpful in moderating stress, in descending order, were relationships with friends, relationships with peers, personal spirituality, and relationships with mentors, supervisors, and professors.

Women students reported significantly greater stress regarding time management and availability ($r = .36$, $p < .05$) and rated it as the fifth highest stressor while men rated it as the eighth highest stressor.

Psychological Health Measures.—Pearson correlations indicated (see Table 3) that graduate students with higher psychological distress, i.e., higher General Health Questionnaire Total scores, were likely to report greater stress regarding their spirituality, practicum work, and relationships with supervisors, professors, and friends. They were likely to cope less frequently by planning or seeking emotional social support. These students were also likely to experience less social support from family and close friends and report fewer contacts with mentors or professors. No significant sex differences were found for reported distress.

Coping

Descriptive statistics regarding coping styles utilized by graduate students in our sample are presented in Table 4. The emotion-focused coping

TABLE 3

PEARSON INTERCORRELATIONS BETWEEN GENERAL HEALTH QUESTIONNAIRE TOTAL SCORES AND OTHER VARIABLES

Variable	r*	N
Professor Relationship Stress	.31	53
Supervisor Relationship Stress	.32	52
Friend Relationship Stress	.28	53
Contacts With Mentor/Professor	−.38	52
Practicum Stress	.44	52
Spirituality Stress	.55	52
Planning	−.28	52
Seeking Emotional Social Support	−.36	51
Social Support From Family/Close Friends	−.40	52

*$p < .05$.

style of positive reinterpretation and growth was reported as utilized most by graduate students as a whole. Students reported utilizing planning, active coping, and seeking emotional social support from "a medium amount to a lot." Also, focus on and venting emotions, restraint coping, acceptance, seeking instrumental social support, and religion were reportedly utilized a "medium amount" by students. Furthermore, students reported utilizing mental disengagement, suppression of competing activities, and humor "a little bit." Finally, respondents reported that they did not typically utilize alcohol and drugs, denial, or behavioral disengagement.

Sex Differences

As mentioned earlier, women graduate students had a significantly

TABLE 4

MEANS, STANDARD DEVIATIONS, AND RANGES FOR COPE SCALES

Item	N	M	SD	Range
Positive reinterpretation/growth	52	12.96	2.39	7–16
Planning	52	12.92	2.58	5–16
Active coping	51	12.33	2.33	5–16
Seek emotional social support	51	12.20	2.90	6–16
Religion	52	11.10	3.68	4–16
Seek instrumental social support	52	11.02	2.50	6–16
Acceptance	52	10.60	3.15	4–16
Restraint coping	52	10.12	2.57	4–16
Focus on and venting of emotions	52	10.04	3.21	4–16
Humor	52	9.98	3.15	4–16
Suppression of competing activities	52	9.85	2.20	4–14
Mental disengagement	53	9.28	2.06	5–14
Behavioral disengagement	53	5.85	1.73	4–10
Denial	51	4.71	1.19	4–9
Alcohol/drug use	52	4.62	1.50	4–13

Note.—Response scores for coping categories had a possible range from 4 to 16.

higher by .2 mean grade point average. Women were likely to report more surgeries ($r = .31$, $p < .05$) and illnesses or trips to the doctor ($r = .29$, $p < .05$). Also, they were likely to have more children living at home ($r = .42$, $p < .05$), to report greater stress about time management and availability ($r = .36$, $p < .05$), and to utilize more seeking of emotional social support ($r = .51$, $p < .01$), planning ($r = .33$, $p < .05$), and focus on and venting emotion ($r = .44$, $p < .01$) as coping styles. Since both sex and the coping style of focus on and venting emotion were significantly correlated with grade point average, a partial correlation was calculated between grade point average and focus on and venting emotion, controlling for sex. The partial correlation indicated that sex accounts for 5% of the association between focus on and venting emotion and grade point average ($r = .21$).

Discussion

Results generally support the hypothesis. Unexpected findings were that more successful students were likely to be women and to report increased use of focus on and venting emotion as a coping style, increased utilization of medical care, and increased stress regarding scholastic coursework. Carver and colleagues (1989) suggest that use of focus on and venting emotion may be maladaptive in situations requiring active coping. It is interesting to note, however, that neither being female nor utilization of focus on and venting emotion were associated with increased distress on any of the General Health Questionnaire scales. It appears that increased female endorsement of this coping style reflects increased utilization of emotional expression rather than increased indication of psychological distress among female students in this sample. This finding supports other research which has indicated that women tend to use more emotion-focused coping than do men (Ptacek, Smith, & Dodge, 1994) and that they tend to be less depressed and more satisfied with their lives when they use emotion-focused coping in stressful situations, while the opposite is true for men (Stanton, *et al.*, 1994). Further research is needed to explore relationships between emotion-focused coping styles, sex, distress, and academic success.

Increased utilization of medical care among more successful graduate students might be indicative of proactive self-care by these students. On the other hand, perhaps students who achieve higher success do so at the expense of their physical health, consequently requiring more frequent medical intervention. Research has indicated that women in general tend to seek medical help more frequently than do men (Corney, 1990). This may explain why the women in this study (who also had higher grade point averages) reported receiving more medical attention. Further research is needed to explore whether increased surgeries and illness/doctor visits are better accounted for by sex or academic success.

Increased coursework stress among students with higher academic success may be related to higher self-expectations for maintaining their high academic standing. It is also likely that more successful students might perceive greater external expectations for their continuing success from faculty, family members, friends, and peers. Given the high stress associated with coursework and dissertations across this entire sample and particularly among the more successful students, it is suggested that graduate psychology programs interview their students for more specific information regarding academic stress and consider tailored interventions.

Some salient findings were unaddressed in the original hypothesis. Perhaps the most useful finding is that increased interpersonal contact and social support were significantly correlated with decreased psychological distress. This suggests that graduate students should be encouraged to seek and maintain social support actively.

Women students' increased stress regarding time management and availability and increased use of planning as a coping strategy may be accounted for by the greater numbers of children living at home. This is consistent with prevailing societal notions that mothers should be primarily responsible for child care. Existing research with college and graduate students (Van Meter & Agronow, 1982; Mallinckrodt & Leong, 1992) confirms greater role strain for women than for men in balancing academic and family demands.

The findings of this study should be considered within the limitations of its design and measurements. The relatively small sample, drawn uniformly from one graduate setting, limits generalizability to other graduate settings and samples. Whether biased response styles may have influenced the self-report data in this study is unknown. In addition, correlations were weak and generally accounted for less than 10% of the total variance. However, as grade point averages in this graduate school setting were primarily limited in range from 3.0 to 4.0, correlations between grade point averages and other variables are likely to be more important than they appear. Further research should seek to extrapolate these findings to other graduate settings and more clearly elucidate any functional associations among sex, academic success, health, social support, and coping styles.

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