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Stress Differences among University Female Students

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ABSTRACT

This study investigated university female students' (who perceived their stress levels as mild, moderate, or severe) scores on a stress inventory. Two hundred fifty-eight women responded to the Student-life Stress Inventory and reported their age. Instructors provided students' semester course grades. Significant differences were found among the stress level groups on all inventory category scores. Posttests showed differences between most paired-stress level groups. No differences were found among the groups on age and course grades. Questions were raised as to stressful differences among female students. Other studies on female stress, identity roles, and personality types were recommended.

INRODUCTION

To understand and assist college students, researchers, psychologists, and counselors conduct studies on differences between men and women. The increasingly complex changes and demands in the Western society, necessitates an understanding on how men and women students perceive and experience their roles. Most people assume that men and women experience differences due to biological reasons and these differences existed overtime and among cultures. However, to understand gender differences one needs to go beyond the biological determinants (Davidson-Katz, 1991).

Riley (2000), in a *Report for National College Week,* indicated that women represented 57 percent of the enrollees in colleges and universities. Adult

female students often combine their schoolings with part-time (or even full-time) jobs and family obligations. In each of these roles, they tend to strive for excellence and try to please those under their care. Many female students take on responsibilities traditionally assumed to be masculine roles or a combination of both feminine and masculine (androgynous) roles.

Prior to 1960, a person was considered healthier (experienced less stress) if he/she identified with their biological sex role (Spence & Helmreich, 1978). Another view was that a person was healthier if he/she identified with the masculine role. However, Bem (1974) theorized that a person was healthier (experienced less stress) if he/she identified with and performed both masculine and feminine roles, that is, androgynous individuals.

Lazarus and DeLongis (1983) indicated that some stressors might be obscured by values and/or constraints of a culture and, therefore, considered unimportant or even unacknowledged by the individual experiencing it. Stressors may also identify one's personality. For instance, a person with a Type A personality, with an aggressive look on life, may perceive and experience severe stress. Whereas, a person with a Type B personality, with a more relaxed view on life, may perceive and experience mild stress.

Previous studies (Gadzella, 1994; Gadzella & Guthrie, 1993; Gadzella, Fullwood, & Ginther, 1991; Gadzella & Baloglu, 2001) showed women experienced more stressful experiences than did the men. However, these data did not indicate if there were stress differences among women. The focus of this study was to investigate whether women students (who perceived different overall stress levels) experienced different stressors and reactions to stressors.

METHOD

Participants were 258 women enrolled at a southwestern state university. In this group, there were 77 freshmen, 50 sophomores, 83 juniors, 17 seniors, 22 graduates, and 9 women did not report their college classification. Thirty-three participants viewed their overall stress as mild, 176 as moderate, and 49 as severe. Their ages ranged from 17 to 55 years.

Student-life Stress Inventory, SSI, (Gadzella, 1991) was used to collect the data. The SSI has 51 items identifying five categories of stressors (frustrations, conflicts, pressures, changes, and self-imposed) and four categories of reactions to stressors (physiological, emotional, behavioral, and cognitive appraisal). Scores for SSI are derived by adding the values for each category separately, following the scoring instructions, and then adding the scores for the stressors and reactions to stressors sections, and total inventory.

Previous studies (Gadzella, 1994; Gadzella, et al 1991; Gadzella & Baloglu, 2001) showed the SSI to be a fairly reliable and valid inventory measuring students' stressors and reactions to stressors. For instance, Cronbach's alphas for 95 participants on the nine SSI categories ranged from .52 to .85 (Gadzella, Fullwood, & Ginther, 1991). For 290 participants on total SSI, the alpha was .76, for men .78, and for women .76 (Gadzella, 1994). Test-retest reliability on SSI for 87 participants was .78, for men .92, and for women .72 (Gadzella & Guthrie, 1993). On the nine categories, test-retest reliabilities for 95 participants ranged from .57 to .76 (Gadzella, et al 1991). Significant differences were found among the three stress level groups (mild, moderate, and severe) on total SSI for 290 participants ($\underline{F} = 71.00$, $\underline{p} < .0009$) in 1994 (Gadzella) and for 381 participants ($\underline{F} = 71.72$, $\underline{p} < .0001$) in 2001 (Gadzella & Baloglu).

Participants signed a release form indicating data may be used in research studies. In responding to the SSI, participants first checked their perceived overall level of stress (mild, moderate, or severe), and indicated their gender, college classification, and age. Then, they ranked each of the 51 items using the 5-point Likert form scale (1 = never, 2 = seldom, 3 = occasionally, 4 = often, and 5 = most of the time). At the end of the semester, instructors provided students' course grades. Responses to SSI, age, and course grades were analyzed using the SPSS program.

RESULTS

Analyses of variance showed significant differences ($\underline{p} < .01$) among the three stress level groups on all categories, sections, and total SSI scores (see Table 1). Posttests showed significant differences ($\underline{p} < .05$) between all groups (mild, moderate, and severe) except between the mild and moderate stress level groups in the Behavioral and Cognitive Appraisal categories. In all other comparisons, the severe stress level group reported higher ratings (that is, experienced more stress) than the moderate and mild stress level groups, respectively. The moderate stress level group reported higher ratings (that is, experienced more stress) than did the mild stress level group. In the Behavioral category, the difference was between the mild and severe stress level groups, with the severe stress level reporting more behavioral stresses, e. g., crying, abusing self and others, etc. In the Cognitive Appraisal category, the difference was between the mild and severe stress level groups, with the severe stress level group reporting higher score. High scores in the Cognitive Appraisal category means participants assigned low values (never and seldom) to statements on analyzing and using effective strategies in stressful situations. In this case, the severe stress level group experienced significantly more stress than did the mild stress level group. There were no significant differences among the stress level groups on course grades or age.

The 95% confidence interval bounds for means for each group in all categories are presented in Table 1. In most cases, the lower and upper bounds of

the 95% confidence interval for the means indicated a clear range of scores for each group. For instance, in the Pressures category, the lower and upper bounds for the mild group was from 10.07 to 12.60, for the moderate group from 13.80 to 14.63, and for the severe group from 15.69 to 17.49. However, in some categories, participants ratings were outsides these bounds. The mean scores were well defined for all groups, except in the Behavioral category, where the mean scores for the mild and moderate stress level groups were the same (17.45).

Table 1: Bounds of 95% Confidence Interval For Mean, Means, Standard Deviations, and F-ratios for Groups (Mild, $\underline{n}$ = 33, Moderate, $\underline{n}$ = 176, Severe, $\underline{n}$ = 49) on Ratings of Their Stressors and Reactions to Stressors.

Category	Group	Bounds Lower	Upper	M	SD	F-ratio $(_{2,255})$
I. Stressors						
Frustrations	Mild	12.75 -	15.31	14.03	3.60	29.91**
	Moderate	16.66 -	17.78	17.22	3.75	
	Severe	20.38 -	21.77	20.57	4.16	
Conflict	Mild	6.91 -	8.19	7.54	1.80	4.18*
	Moderate	8.27 -	8.84	8.56	1.93	
	Severe	8.08 -	9.43	8.75	2.35	
Pressure	Mild	10.07 -	12.60	11.33	3.56	31.23**
	Moderate	13.80 -	14.63	14.21	2.79	
	Severe	15.69 -	17.49	16.59	3.14	
Change	Mild	5.28 -	6.54	5.91	1.77	37.37**
	Moderate	7.59 -	8.30	7.95	2.39	
	Severe	9.68 -	11.51	10.59	3.19	
Self-Imposed	Mild	18.40 -	21.12	19.76	3.83	9.71**
	Moderate	21.35 -	22.48	21.91	3.77	
	Severe	22.37 -	24.81	23.59	4.25	
II. Reactions to Stressors						
Physiological	Mild	23.43 -	29.11	26.27	8.00	24.29**
	Moderate	30.41 -	32.87	31.64	8.28	
	Severe	36.30 -	42.88	39.59	11.45	
Emotional	Mild	8.56 -	11.14	9.85	3.64	26.77**
	Moderate	11.51 -	12.60	12.05	3.65	
	Severe	14.47 -	16.60	15.53	3.69	
Behavioral	Mild	15.90 -	19.01	17.45	4.38	21.38**
	Moderate	16.82 -	18.08	17.45	4.23	
	Severe	20.54 -	23.95	18.36	4.97	
Cognitive Appraisal	Mild	4.87 -	6.53	5.70	2.34	6.16*
	Moderate	5.60 -	6.19	5.89	1.99	
	Severe	6.39 -	7.61	7.00	2.13	
III. Totals	Mild	109.95 -	125.74	117.85	22.26	45.65**
	Moderate	133.58 -	140.20	136.89	22.23	
	Severe	156.66 -	172.28	164.47	27.20	

$* p \le .02 \quad ** p \le .0001$

DISCUSSION

The results in this study showed vast differences in stress scores among adult female students who identified themselves by stress levels. That is, scores for women on the inventory matched their perceived stress levels. Simply stated, women who perceived their overall stress as severe, reported high scores on all categories of the inventory; whereas, women who perceived their overall stress as mild, reported much lower scores. However, there are limitations in the study as many questions were raised. For instance, why were there such vast differences among the female students? Did some women experience pleasant and challenging situations, thus, perceived stress as mild; whereas, other women experienced unpleasant and stressful situations, which they perceived as severe? Were differences due to the roles women undertook other than biological sex roles, that is, masculine or androgynous? Were differences due to the culture women lived in, and/or their personality types?

In spite of the limitations in this study, the hope is that data will be valuable to adult female students, instructors, and counselors. The findings may help female students in understanding their stressful experiences, attitudes, and behaviors. The data may help instructors and counselors in understanding why some of their female students show high anxiety, fear, and depression. Other studies are recommended on stress with adult female students including their identification roles and personality types.

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