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ABSTRACT

This document consists of the report of a study undertaken to establish the existence of any gender specific differences in the perceived antecedents of academic stress. The definition of stress as a negative emotion strongly associated with doubt about coping is suggested to be particularly relevant to the academic arena where students increasingly are being expected to cope with increasingly larger workloads that concomitantly lead to an increase in self-doubt with regard to their aptitude. A strength of this study is that the question of adolescent stress was investigated using an instrument specifically designed for use with an adolescent population. The Academic Pressure Scale for Adolescents was administered to 112 girls and 160 boys attending high school. Significant gender based differences were obtained on 8 of the 35 questions comprising the scale. The eight questions concerned concern or frustration about: (1) performance on a test even after the test is over; (2) inability to learn assignments; (3) difficulty understanding assignments; (4) being made fun of because of inability to answer a question in class; (5) parental pressure for better grades; (6) consultation with teachers over low grades; (7) pretest stress; and (8) being accused of not trying in class if performance was not up to what the school expected. In each case girls reported greater stress than boys. This study provides strong evidence that girls and boys of high school age differentially experience the antecedents of academic stress and that adolescent girls experience greater academic stress than boys. (DK)

GENDER SPECIFIC DIFFERENCES IN THE PERCEIVED ANTECEDENTS OF ACADEMIC STRESS[1]

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Running head: GENDER SPECIFIC DIFFERENCES IN ACADEMIC STRESS

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Summary. - This study was undertaken to establish the existence of any gender specific differences in the perceived antecedents of academic stress. The Academic Pressure Scale for Adolescents was administered to 112 girls and 160 boys attending high school. Significant gender based differences were obtained on eight of the 35 questions comprising the scale. In each case girls reported greater stress than boys. This study provides strong evidence that girls and boys of high school age differentially experience the antecedents of academic stress and that adolescent girls experience greater academic stress than boys.

GENDER SPECIFIC DIFFERENCES IN THE PERCEIVED ANTECEDENTS OF ACADEMIC STRESS

The definition of stress has evolved considerably as interest in this phenomenon has developed. Selye (1974) defined stress as "the nonspecific response of the body to any demand made upon it" (p. 27). Later, Schuler (1980) narrowed this definition to define stress as the imbalance occurring when opportunity, demands, and constraints interact in an individual. More recently this definition has been refined by King, Stanley, and Burrows (1987) and stress is now defined as a negative emotion strongly associated with doubt about coping (King, et al.,1987). This definition seems particularly relevant to the academic arena where students are increasingly being expected to cope with increasingly larger workloads which concomitantly leads to an increase in self doubt with regard to their aptitude.

The past fifteen years have witnessed the accumulation of an impressive body of research linking stress as a causative factor in the development of somatic (e.g., Davis & Compas, 1986; Hotaling, Atwell, & Linsky, 1978; Vaux & Ruggiero, 1983), behavioral (e.g., Compas, 1987; Uribe, 1986), and psychological disorders (e.g., Compas, 1987; Compas, Slavin, Wagner, & Vannatta, 1986; Newcombe, Huba, & Bentler, 1981). Recent years have also seen increasing concern regarding the adverse effects of stress associated with adolescence. Amongst the teenage population there exists an increasing incidence of psychosomatic illness, suicide, substance abuse, delinquent behavior, and juvenile crime. It has been suggested that these activities are symptomatic of stress and that the increasing incidence is indicative of increasing stress within the adolescent population.

A substantial proportion of the stress affecting adolescents is likely to originate from the academic arena. This is a consequence of the considerable proportion of students' lives spent within the school environment or under the influence of academic concerns. Indeed

academic problems are known to be among the most commonly reported sources of stress for adolescents (Genshaft & Broyles, 1991; McGuire & Mitic, 1987).

Despite the enormous quantity of literature devoted to stress, comparatively little has been focused on the adolescent. Of these few articles, most have suffered from severe limitations most notably the measurement of adolescent stress through the administration of adult life event scales (Zambrana & Silva-Palacios, 1989). This investigation used a self report scale specifically designed for adolescents. The aim of this study was to establish the existence of any gender specific differences in the perceived antecedents of academic stress.

PROCEDURE

Subjects and Administration

The sample consisted of 112 female and 160 male adolescent school children. These students were all aged between 13 and 17 years and were attending Grades 8 through 12 in a suburban school. Their ethnic background was White. Ninety nine subjects (36.4%) described their father's occupation as professional, 105 (38.6%) as blue collar, 16 (5.9%) as salesperson, 2 (0.7%) as househusband, and 35 (12.9%) as unemployed. Fifteen subjects (5.5%) came from single parent families where the father was absent. Sixty subjects (22.1%) described their mother's occupation as professional, 36 (13.2%) as blue collar, 64 (23.5%) as salesperson, 10 (3.7%) as secretarial, 96 (35.3%) as housewife, and 3 (1.1%) as unemployed. Three subjects (1.1%) came from single parent families where the mother was absent. Subjects took part in the study voluntarily. Each subject was administered a test booklet which contained a covering sheet requesting demographic information and a copy of the Academic Pressure Scale for Adolescents. Administration took place within the classroom setting in the absence of the classroom teacher.

Instrumentation

A strength of this study was that the question of adolescent stress was investigated using an instrument specifically designed for use with an adolescent population. This instrument, the Academic Pressure Scale for Adolescents, was initially designed as a questionnaire by West and Wood (1970) and later developed into a scale by Wiekhorst (1973). The scale identifies the perceived antecedents of academic stress and is comprised of 35 items in Likert format scored strongly disagree weighted as one, disagree weighted as two, undecided weighted as three, agree weighted as four, and strongly agree weighted as five. The test-retest reliability is .78 (Coney & West, 1979; West, Wills, & Sharp, 1982).

RESULTS

Boy and girl performance on each of the 35 items comprising the Academic Pressure Scale for Adolescents was compared through the application of a *t* test. The results are presented in Table 1.

Insert Table 1 about here

Significant gender based differences were found on eight of the 35 questions which comprise the scale. For each of these eight questions girls exhibited greater mean scores than boys, indicating that significantly higher stress was experienced by girls than boys. The eight questions for which a significant gender based difference was obtained were:

2. I often find myself worrying after I have taken a test even though I know it is too late to do anything about it.
9. It is very frustrating for me when I can't seem to learn the things I'm supposed to for school.
16. It upsets me when I can't understand the assignments my teacher gives at school.

20. It embarrasses me when the kids at school make fun of me because I can't answer a question in class.

25. It would frustrate me if my parents told me that I should be able to make better grades at school.

27. It would upset me if my teacher had to talk to me about a low grade I had received in school.

30. I become upset when I begin to study for an important test at school.

34. It would disturb me if my teacher said I wasn't trying in class because I didn't do as well as the school thought I should do.

DISCUSSION AND CONCLUSION

These findings suggest that there are gender specific differences in the perceived antecedents of academic stress, with girls tending to experience more stress than boys. However, the fact that boys and girls did not show significant differences on 27 of the 35 items comprising the scale is indicative of the fact that for many areas of the academic arena gender based differences in the perceived antecedents of academic stress do not exist. This may help to explain some of the disagreement in the literature. The interesting question now becomes: what is the cause(s) of the differential performance on those eight items on which boys and girls differed significantly?

Further research should assess effective ways of ameliorating the academic stress on our adolescent youth and, based on the findings of this study, particularly from adolescent girls. This can only be achieved by first increasing our understanding of those stressors originating from the academic environment, their effects on the developing adolescent, and other factors besides gender which may play a part in the effects of academic stress including cultural background, age, grade, socioeconomic status, academic aspirations, and academic ability.

As we progress towards the next millennium the negative effects of stress will likely continue to affect the adolescent members of our society. By attempting to focus on those stressors which are peculiar to adolescence and on the responses by adolescents (Zambrana

& Silva-Palacios, 1989), researchers should be able to both identify the sources of stress and determine ways to reduce the deleterious effects of stress. Bearing in mind the importance of education, the reduction of academic stress among adolescents through a greater understanding of this complex but costly phenomenon is a particularly worthwhile goal.

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TABLE 1

RESULTS OF T TESTS COMPARING RESPONSES OF GIRLS AND BOYS TO EACH QUESTION ON THE APSA

	Girls			Boys				
Item	M	SD	SE	M	SD	SE	t_{270}	p
1	2.84	1.26	.119	2.98	1.16	.092	0.96	.340
2	3.59	1.23	.117	4.08	1.05	.083	3.49	.001≠
3	3.32	1.04	.098	3.28	0.99	.078	-0.32	.748
4	4.21	1.15	.109	4.35	0.97	.076	1.05	.293
5	2.91	1.31	.124	2.96	1.36	.107	0.31	.754
6	3.61	1.22	.115	3.38	1.28	.101	-1.50	.134
7	3.43	1.20	.113	3.51	1.01	.080	0.62	.533
8	2.74	1.18	.111	2.75	1.20	.095	0.06	.952
9	3.87	0.99	.094	4.17	0.99	.078	2.49	.013*
10	4.01	1.09	.103	4.15	1.00	.079	1.11	.270
11	3.78	1.21	.114	3.78	1.20	.095	-0.01	.990
12	3.63	1.26	.119	3.61	1.30	.103	-0.08	.937
13	3.22	1.14	.107	3.45	1.12	.089	1.63	.104
14	4.19	0.94	.088	4.22	0.90	.071	0.28	.782
15	2.92	1.27	.120	3.17	1.24	.098	1.61	.108
16	3.49	1.16	.109	3.88	1.14	.090	2.72	.007†
17	3.30	1.32	.125	3.29	1.20	.095	-0.10	.917
18	3.36	1.25	.118	3.16	1.21	.095	-1.33	.184
19	2.96	1.34	.126	2.94	1.30	.102	-0.11	.912
20	2.67	1.24	.117	3.22	1.28	.101	3.57	.001≠

TABLE 1 CONT.

	Girls			Boys				
Item	M	SD	SE	M	SD	SE	t 270	p
21	3.10	1.34	.127	3.02	1.23	.097	-0.50	.614
22	2.86	1.25	.118	2.91	1.22	.097	0.32	.747
23	2.90	1.25	.118	3.03	1.30	.103	0.82	.413
24	3.43	1.28	.121	3.19	1.38	.109	-1.46	.144
25	3.46	1.19	.113	3.79	1.16	.092	2.30	.022*
26	3.51	1.18	.112	3.39	1.27	.100	-0.76	.450
27	3.43	1.22	.115	3.80	1.01	.080	2.73	.007†
28	4.38	0.73	.069	4.29	0.81	.064	-0.95	.345
29	2.68	1.17	.111	2.80	1.24	.098	0.77	.441
30	2.47	1.14	.108	3.18	1.28	.101	4.65	.001≠
31	3.71	1.35	.128	3.81	1.30	.103	0.66	.512
32	3.65	1.24	.117	3.90	0.98	.078	1.84	.067
33	3.56	1.23	.116	3.41	1.29	.102	-0.96	.337
34	3.68	1.11	.105	3.97	0.92	.073	2.35	.020*
35	3.12	1.21	.115	3.17	1.08	.085	0.38	.707

* $p < .05$, † $p < .01$, ≠ $p < .001$