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ABSTRACT

This study examined school-related stress in children with and without disabilities, specifically the sources and manifestations of such stress and whether children with disabilities experience greater degrees of school-related stress than children without disabilities. The nondisabled group comprised 7,200 grade 4-12 students from urban and suburban school districts in Connecticut and Rhode Island. Subjects with disabilities were 249 students, of whom 43.8 percent had developmental disabilities (learning disabilities and mental retardation) and 54.2 percent had emotional disabilities. All subjects were given the School Situation Survey, a measure of school-related sources and manifestations of stress in children. (Survey items are listed.) Findings indicated that students with disabilities generally scored higher on the scales related to Teacher Interactions and Peer Interactions, while children without disabilities scored higher on scales related to Academic Stress and Academic Self Concept. However, only the intergroup differences at the high school level on the Peer Interactions and Academic Stress scales were statistically significant. Students with disabilities scored higher on all three manifestations scales (Emotional, Behavioral, and Physiological) regardless of grade level, but the only statistical significance was for middle school students on the behavioral and physiological scales. (Contains 21 references.) (DB)

School-Related Stress: Children With and Without Disabilities[1]

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School-Related Stress: Children with and without Disabilities

Purpose of the Study

There is increasing evidence that stress is a significant problem for children that may impact their physical and emotional health as well as their academic performance (Helms, 1994; Helms & Gable, 1989). Mantzicopoulos (1990) defined stress as an unfolding, dynamic relationship between the individual and their environment. According to D'Onofrio and Klesse (1990), stress in a physical response which causes real and measurable changes in many bodily functions and is particularly apparent during major life events. They suggest that an individual makes two interdependent assessments of stressful situations: what is at stake and what they can do about it. For the purpose of this study stress was defined as emotional tension or anxiety arising from situations perceived as traumatic or threatening to one's security, self-esteem, safety or way of life (Chandler, 1981; Schultz, 1980). It should be noted that it is the ***child's perception*** of a particular event which makes the event a stressor (Gold, 1988; Phillips, 1993).

The National Education Goals call for all children to start school ready to learn and to demonstrate competency in challenging subject matter. School makes up a significant part of a child's life and provides a context in which demands for academic performance, social relationships, and acceptance are placed on children. They are constantly being evaluated by their teachers, parents and peers. Highly anxious children tend to engage in more problem behavior, are more disliked by their peers, have a poorer self-concept, and lower school achievement. Phillips (1993) identified two major categories of school-related stressors: (a) achievement or the mastery of academic subject matter and evaluation of performance; and, (b) social or the relationships with peers, interactions with teachers and participation in classroom

activities.

Bauwens and Hourcase (1992) interviewed at-risk students about school-based sources of stress. The resulting categories were: school work, social interactions, treatments by teachers, discipline and classroom management procedures, extra-curricular activities, and public performance. Omizo, Omizo and Suzuki (1988, 1990) investigated stressors and symptoms in elementary, middle and high school students. While school-related problems and family problems were reported by all three groups, specific problems varied between the three groups. For example, elementary students cited fear of failing, not being liked by their teachers, and failing to meet the expectations of their parents and teachers. Middle school students mentioned not doing well academically, having problems with their teachers, and not seeing the relevance of school. The high school students' responses included getting good grades, taking courses to get into college, and not being understood by their teachers. Three categories emerged: school achievement, affiliation, and family situations.

Research on school-related stress, and particularly children with disabilities, is rare. And yet these children may experience even greater stress while having fewer strategies for deal with it. Children with disabilities are often at an even greater disadvantage because they have not learned the social-behavioral skills necessary for success in school. School is about socialization as much as it is about academics. An important component of these social skills is appropriate coping skills. Students' methods of resolving conflict in school impact their relationships with teachers and classmates. When the prerequisite skills are not learned a cycle of dysfunctional interactions may be set into motion (Brenner, 1984; D'Onofrio & Klesse, 1990; Fad, 1990; Phillips, 1993; Truesdell & Abramson, 1992).

Little research has been conducted which looks at children with disabilities and their non-disabled classmates. However, in two such studies (Fox & Weaver, 1989; Polloway, Epstein & Cullinan, 1985), two factors were found on which children with disabilities differed significantly from children without disabilities: lack of cognitively and behaviorally learned social skills and attention span. These factors may generate negative attitudes on the part of teachers which may further extend to classmates without disabilities.

This study compared sources and manifestations of school-related stress as experienced by children with and without disabilities.

Research Goals, Design and Methodology

Goal and Objectives

The goal of this study was to examine sources and manifestations of school-related stress in children with and without disabilities. Two specific objectives were:

1. To determine if children with disabilities experienced greater degrees of school-related stress than children without disabilities. Differences were examined for three grade groups: elementary (Grades 4 and 5); middle (Grades 6-8); and high (Grades 9-12).

2. To determine if children with disabilities experienced manifestations of school-related stress more frequently than children without disabilities. Differences were examined for three grade groups: elementary (Grades 4 and 5); middle (Grades 6-8); and high (Grades 9-12).

Sample

The overall sample is comprised of 7285 students from Grades 4 through 12. The students are from urban and suburban school districts in Connecticut and Rhode Island. The children and youth with disabilities (N=249) represent two categories of primary disability: developmental (LD/MR) and emotional, and spend at least some if not all of their day in a

general education classroom. Of these students, 43.8% were identified as having a developmental disability and 54.2% were identified as having an emotional disability.

The remaining students were participants in the validation and normative samples of the instrument being used in the study (Helms & Gable, 1989).

Description of Instrument

The *School Situation Survey* (Helms & Gable, 1989) was developed as part of a study of school-related sources and manifestations of stress in children in Grades 5, 7 and 9 (Helms, 1985). The instrument has 34 items or statements which are listed in Table 1. It contains seven scales: four which deal with sources of stress:

Peer Interaction	Academic Stress
Teacher Interaction	Academic Self-Concept

and three which address manifestations of stress:

Emotional Manifestations
Behavioral Manifestations
Physiological Manifestations

Students respond to statements by indicating the frequency with which the item applies to them. The frequency dimension ranges from Never to Always (i.e., 1=Never, 2=Rarely, 3=Sometimes, 4=Often, and 5=Always). All seven scales are scored so that high scores indicate a high degree of stress. However, in the case of the Academic Self-Concept scale, high scores indicate poor or low academic self-concept.

Alpha internal consistency reliability coefficients were generated for the original validation and normative groups. These groups were comprised of children in regular education programs. The coefficients ranged from .68 to .78 for the sources of stress and .68 to .80 for the manifestations of stress (Helms & Gable, 1989). To assess the reliability of the scales for

children with disabilities, alpha internal consistency reliability coefficients were generated for the four source scales and the three manifestations scales using the data from this group (Helms, 1944). The coefficients, similar to those of the original validation sample, ranged from .68 to .72 for the source scales and from .69 to.75 for the manifestations scales. These are considered to be moderate to high given the affective nature of the instrument and the population being studied (Gable, 1986; Nunnally, 1978; Pedhazur & Schmelkin, 1991).

For the purpose of this study the instrument was printed in a larger format with the response scale listed under each statement. Responses could be circled by the respondent or a surrogate. Permission was obtained from the publisher to reproduce the instrument for research purposes.

Definition of Variables

Disability Group:

- Developmental Disability: learning disabled, educable mental retardation
- Emotional Disability: social-emotional maladjustment, behavior disordered

Grade/Age Groups:

- Elementary School: Grades 4-5 or Ages 9-14
- Middle School: Grades 6-8 or Ages 12-15
- High School: Grades 9-12 or Ages 14-19

Sources of Stress

- Teacher Interactions: students' interactions with their teachers or their perceptions of their teachers' attitudes toward them.
- Peer Interactions: students' interactions with their classmates or their perceptions of their classmates' feelings toward them.
- Academic Stress: students' perceptions of their academic performance or achievement.
- Academic Self-Concept: students' feelings of self-worth, self-esteem, or self-concept with respect to their perceived academic ability.

Table 1

Helms & Gable *School Situation Survey* (1989) Items[a]

1. I enjoy doing things with my classmates.
2. I feel that some of my teachers don't like me very well.
3. I get into fights.
4. I feel upset.
5. I worry about not doing well in school.
6. I get headaches.
7. I do well in school and get good grades.
8. Other students make fun of me.
9. I feel that some of my teachers expect too much of me.
10. I talk in class when I should be quiet.
11. I feel mixed up.
12. I get along well with my classmates.
13. Some of my teachers call on me when they know I am not prepared just to embarrass me.
14. I pick on other students.
15. I feel frustrated.
16. I am afraid of getting poor grades.
17. I feel sick to my stomach.
18. I feel that I learn things easily.
19. I am among the last to be chosen for teams.
20. I feel that some of my teachers don't really care about what I think or how I feel.
21. I yell at my classmates.
22. I feel like crying.
23. I enjoy talking to my classmates.
24. I feel that my teachers treat me fairly.
25. I talk back to my teachers.
26. I feel nervous.
27. I worry about taking tests.
28. I get stomachaches.
29. I do good work in school.
30. I have many friends.
31. Some of my teachers yell at me for no reason.
32. I try to get attention by acting silly in class.
33. I feel angry at school.
34. School work is easy for me.

[a] Underlined items are positive item stems. They were reversed scored so that a high score would indicate high stress.

Manifestations of Stress

- Emotional Manifestations: feelings such as fear, shyness, and loneliness.
- Behavioral Manifestations: actions, reactions, or behavior towards others such as striking out or being hurtful or disrespectful.
- Physiological Manifestations: physical reactions or functions such as nausea, tremors, or rapid heartbeat.

Methodology and Data Analysis

To determine if there were differences between the two groups on the sources and manifestations of school-related stress, scores were calculated for each of the four source scales and each of the three manifestations scales. These scores were analyzed using *t*-test procedures[2] and a significance level of .001 to determine if significant differences existed between students identified as having a developmental or an emotional disability and students without disabilities. Effect sizes were also calculated to assess the practical significance of the results in light of the sometimes large sample sizes.

Research Question 1: Sources of School-Related Stress

The first research objective examined two questions:

1-1 Do children with disabilities experience greater degrees of school-related sources of stress than children without disabilities?

1-2 Do children with disabilities in elementary, middle or high school grade groups experience greater degrees of school-related sources of stress than their same grade group classmates without disabilities?

Results

The first question (1-1) compared the overall group of children with respect to the four

[2]The *t*-test was used rather than MANOVA due to the unavailability of the raw data from the children without disabilities. The level of significance was set at .001 to account for the use of multiple *t*-tests.

sources of stress. Table 2 shows the scale means, standard deviations, *t*-values, effect sizes (ES) for the two groups in total and for the individual grade level groups for each of the sources of stress. The students with disabilities had higher mean scores on two of the four scales indicating greater degrees of stress in these areas than the students without disabilities. In the case of Peer Interaction [$t=4.11$, *df* 7283, $p<.001$] the result was statistically significant, however, the difference between the groups on the Teacher Interaction was not significant. The group of students without disabilities had a higher mean score on the Academic Stress scale [$t=3.93$, *df* 7283, $p<.001$] (this scale refers to students' perceptions of their academic *performance* or *achievement*). The groups did not differ significantly on the Academic Self-Concept scale (this scale refers to students' feelings of self-worth, self-esteem, or self-concept with respect to their perceived academic *ability*) although the students without disabilities reported a greater degree of stress.

The second question (1-2) compared the two groups within three grade level groups: elementary, middle and high school. Although the elementary school children with disabilities scored higher on the Teacher Interaction and Academic Stress scales and the children without disabilities scored higher on the Peer Interaction and Academic Self-Concept scales, these differences did reach statistical significance.

Middle school students with and without (Grades 6-8) varied across the scales. In the case of Teacher Interactions and Peer Interactions children with disabilities had greater degrees of stress as indicated by a higher mean on both scales. In the case of stress regarding academic performance as measured by the Academic Stress scale, students without disabilities scored higher than students with disabilities. However, none of these differences were large enough to

Table 2

Scale Means, Standard Deviations, *t*-Values and Effect Sizes (ES) for the *School Situation Survey* (Helms & Gable, 1989) Sources of Stress for the Entire Sample and Each Grade Level Group

	Students Without Disabilities			Students With Disabilities					
Group/Scale	N	M	SD	N	M	SD	*t*	*p*	ES
Entire Sample									
Teacher Interaction	7036	2.28	0.77	249	2.43	0.83	2.81	NS	.19
Peer Interaction	7036	1.98	0.61	249	2.18	0.76	4.11	*	.29
Academic Stress	7036	3.37	0.99	249	3.08	1.15	3.93	*	.27
Academic Self-Concept	7036	2.56	0.68	249	2.47	0.78	1.80	NS	.12
Elementary School Students									
Teacher Interaction	567	2.00	0.83	41	2.26	0.65	2.42	NS	.35
Peer Interaction	567	2.06	0.72	41	2.03	0.70	0.26	NS	.04
Academic Stress	567	3.13	0.99	41	3.24	1.20	0.57	NS	.10
Academic Self-Concept	567	2.40	0.69	41	2.28	0.79	0.95	NS	.16
Middle School Students									
Teacher Interaction	2531	2.26	0.80	125	2.47	0.87	2.64	NS	.25
Peer Interaction	2531	1.99	0.64	125	2.09	0.74	1.48	NS	.14
Academic Stress	2531	3.42	0.97	125	3.14	1.17	2.63	NS	.26
Academic Self-Concept	2531	2.48	0.63	125	2.47	0.83	0.13	NS	.01
High School Students									
Teacher Interaction	1607	2.46	0.71	49	2.51	0.91	0.38	NS	.06
Peer Interaction	1607	1.97	0.56	49	2.39	0.79	3.69	*	.62
Academic Stress	1607	3.38	0.98	49	2.85	1.02	3.59	*	.53
Academic Self-Concept	1607	2.66	0.67	49	2.50	.075	1.48	NS	.23

* $p < .001$

achieve statistical significance. The two groups did not differ at all on the Academic Self-Concept (*ability*) scale.

High school students with disabilities had a significantly higher degree of stress related to Peer Interactions [t=3.69, *df* 1654, p<.001] than did students without disabilities. They also reported slightly higher (though not statistically significant) stress regarding Teacher Interactions. Students without disabilities had significantly higher Academic Stress [t=3.59, *df* 1654, p<.001]. While they reported greater stress regarding their Academic Self-Concept it was not significantly higher than that of students with disabilities.

Research Question 2: Manifestations of School-Related Stress

The second research objective examined two questions:

2-1 Do children with disabilities experience greater degrees of school-related manifestations of stress than children without disabilities?

2-2 Do children with disabilities in elementary, middle or high school grade groups experience greater degrees of school-related manifestations of stress than their same grade group classmates without disabilities?

Results

The first question (2-1) compared the overall group of children with respect to the three manifestations of stress. Table 3 contains the scale means, standard deviations, t-values and effect sizes for the various groups for the three scales. The students with disabilities scored significantly higher on all three manifestations scales (Emotional [t=4.58, *df* 7283, p<.001]; Behavior [t=6.35, *df* 7283, p<.001]; and Physiological [t=4.79, *df* 7283, p<.001]) than the students without disabilities.

The second question analyzes each of the three grade level groups on the three manifestations scales. The elementary students with disabilities reported higher incidence of

Table 3

Scale Means, Standard Deviations, *t*-Values and Effect Sizes (ES) for the *School Situation Survey* (Helms & Gable, 1989) Manifestations of Stress for the Entire Sample and Each Grade Level Group

	Students Without Disabilities			Students With Disabilities					
Group/Scale	N	M	SD	N	M	SD	*t*	*p*	ES
Entire Sample									
Emotional	7036	2.32	0.72	249	2.53	0.71	4.58	*	.29
Behavioral	7036	1.99	0.66	249	2.32	0.81	6.35	*	.45
Physiological	7036	2.27	0.78	249	2.55	0.91	4.79	*	.33
Elementary School Students									
Emotional	567	2.30	0.72	41	2.54	0.71	2.09	NS	.34
Behavioral	567	1.87	0.67	41	2.05	0.82	1.37	NS	.24
Physiological	567	2.27	0.84	41	2.63	0.89	2.51	NS	.42
Middle School Students									
Emotional	2531	2.31	0.71	125	2.48	0.73	2.54	NS	.24
Behavioral	2531	2.01	0.67	125	2.35	0.81	4.62	*	.46
Physiological	2531	2.26	0.76	125	2.54	0.92	3.35	*	.33
High School Students									
Emotional	1607	2.46	0.74	49	2.62	0.67	1.64	NS	.23
Behavioral	1607	2.12	0.66	49	2.36	0.80	2.08	NS	.33
Physiological	1607	2.33	0.79	49	2.54	0.93	1.56	NS	.24

* $p < .001$

Emotional, Behavioral, and Physiological manifestations of stress than did the children without disabilities. However, these did not achieve statistical significance.

The means of the middle school children with disabilities on two of the three manifestations scales were significantly higher than those of the children without disabilities: Behavioral [t=4.62, df 2654, $p<.001$]; Physiological [t=3.35, df 2654, $p<.001$]. Although their mean on the Emotional manifestations scale was higher, the difference was not sufficient to achieve statistical significance.

The high school students with disabilities reported higher incidence of all three manifestations of stress, however, none of the differences were significantly higher.

Discussion

With respect to the school-related sources of stress, students with disabilities generally scored higher on the scales which related to Teacher Interactions and Peer Interactions while the children without disabilities scored higher on the scales related to Academic Stress and Academic Self-Concept. Students with disabilities had higher means on all three of the manifestations scales: Emotional, Behavioral, and Physiological.

Sources of Stress. As Table 4 shows, only the differences between high school age children on the Peer Interactions and Academic Stress scales were large enough to achieve significance. The high school students with disabilities had significantly higher stress in the area of their relationships to their peers. These included getting along well with their classmates, doing things with their classmates or being made fun of by other students. The two groups did not differ significantly with regard to teachers but the students without disabilities had significantly more stress regarding their performance and grades.

Table 4

Summary of Results by Scale and Grade Group

Grade Level Group	Significant Difference[a]	Group with Higher Mean: Without Disabilities	Group with Higher Mean: With Disabilities
	Sources of Stress		
Elementary School Students			
Teacher Interaction	NS		X
Peer Interaction	NS	X	
Academic Stress	NS		X
Academic Self-Concept	NS	X	
Middle School Students			
Teacher Interaction	NS		X
Peer Interaction	NS		X
Academic Stress	NS	X	
Academic Self-Concept	NS	X	
High School Students			
Teacher Interaction	NS		X
Peer Interaction	*		X
Academic Stress	*	X	
Academic Self-Concept	NS	X	

[a] $p < .001$

Grade Level Group	Significant Difference[a]	Group with Higher Mean Without Disabilities	With Disabilities
	Manifestations of Stress		
Elementary School Students			
Emotional	NS		X
Behavioral	NS		X
Physiological	NS		X
Middle School Students			
Emotional	NS		X
Behavioral	*		X
Physiological	*		X
High School Students			
Emotional	NS		X
Behavioral	NS		X
Physiological	NS		X

[a] $p < .001$

Manifestations of Stress. The students with disabilities scored higher on all three manifestations scales regardless of their grade level. In most cases the differences were not statistically significant. Middle school students with disabilities reported significantly more occurrences of stomach aches and headaches as well as getting into fights, talking back to their teachers, yelling at their classmates and acting out in class.

Benefits of the Study

This study has examined school-related sources and manifestations of stress in children in an attempt to determine whether children with disabilities differ from children without disabilities. The results show that children with disabilities tend to have greater stress regarding

relationships with their teachers and their classmates while children without disabilities tend to be more concerned with their academic performance and grades. The lack of statistical significance in many cases, however, along with the generally small effect sizes (Pedhazur & Schmelkin, 1991) suggest that children with disabilities do not differ from their same grade classmates without disabilities. The exception being students in high school where students in the former group experience stress related to interactions with their peers and students in the latter group experience stress related to their academic performance. It would appear that children with disabilities experiences more frequent manifestations of stress, in particular, middle school students with disabilities have significantly more behavioral and emotional manifestations than students without disabilities. This final point might suggest to teachers that they look for possible stressors which encountering heightened emotional or behavioral symptoms with these students.

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