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ABSTRACT

Factors related to teacher stress and the relationship between teacher stress and student achievement were investigated using a qualitative research approach. Regular education teachers (n=35) and special education teachers (n=28) of mildly handicapped elementary students were interviewed about their perceptions of general stress in teaching, stress in teaching mildly handicapped students, advantages and disadvantages of teaching, and perceptions of parental and administrative support. Teachers reported moderate stress associated with teaching, little parental support, and fairly high administrative support. Factors that appeared to be related to teacher stress were the teacher's school district (urban/suburban) and the educational degree obtained; these two factors interacted with teacher category (regular/special education). No relationship was found between teacher self-reports of job-related factors and stress and the achievement of their mildly handicapped students. Based on the results of this and other research on teacher stress, suggestions for future research and for improving teaching conditions are offered. (Author/JW)

University of Minnesota

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Abstract

Factors related to teacher stress and the relationship between teacher stress and student achievement were investigated. Regular education (n = 35) and special education teachers (n = 28) of students with mild handicaps (learning disabled, emotionally/behaviorally disturbed, and educable mentally retarded) were interviewed about their perceptions of stress in teaching, stress in teaching mildly handicapped students, advantages and disadvantages in teaching, and perceptions of parental and administrative support. A qualitative research approach was used in order to provide freedom for the discussion of conditions in the teaching environment. Teachers in this study reported moderate stress associated with teaching, little parental support, and fairly high administrative support. Factors that appeared to be related to teacher stress were the teacher's school district (urban/suburban) and the educational degree obtained, and these interacted with teacher category (regular/special education). No relationship was found between teacher reports of stress and achievement of mildly handicapped students. It also was found that the conditions of teaching were not always satisfactory for teachers. Based on the results of this and other research on teacher stress, suggestions for improving teaching conditions are given, as are directions for future research.

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Teacher Stress and Student Achievement for Mildly Handicapped Students

Teaching has been said to be a "stressful" profession. Those who teach handicapped students are sometimes thought to experience more "stress" than those who do not have large numbers of handicapped students in their classes. Teacher stress is of concern because it is believed that under inordinate stress, teachers' job performance suffers, leading to less than optimal school experiences for both teachers and students. Stress is believed to be a precipitating factor in teacher absenteeism, ill health, and leaving the profession (Kyriacou & Sutcliffe, 1979; Litt & Turk, 1985). Research has shown that teachers under much stress behave differently with students; teachers become less tolerant, less patient, interact less with students and emphasize rote learning (Blase, 1986; Galbo, 1983). When the daily routine becomes stressful and time-consuming, teachers do not have the time or energy for creative activities and personal interaction with students.

Several concerns have been raised about research on teacher stress. It has been said that prior research often has been methodologically flawed. Much of the literature is anecdotal in nature and based on casual observations. Often the term "stress" is not clearly conceptualized. Response rates are poor in many of the survey-based studies (Farber, 1984), often below 50%, calling into question the representativeness of the samples (Litt & Turk, 1985). In these studies, it is not known whether teachers are more or less likely to respond to a survey when experiencing stress. Empirically sound research on factors affecting job satisfaction is necessary, however, in light of the fact that 10% of all teachers leave the profession each year and only 59% of teachers remain in the classroom more than four years (Farber, 1984).

Several researchers have investigated events that are stressful to teachers. Fewer studies, however, have examined rewards and advantages of teaching, and the possibly mediating effects of these advantages on teacher reports of stress. The relationship between teacher stress and factors such as administrative, collegial and parental support, classification of students taught (learning disabled, emotionally disturbed, educable mentally retarded, nonhandicapped), demographic variables, and student achievement also has received little attention.

Definition of teacher stress. Before reviewing results of studies in which the relationship between teacher stress and various factors have been considered, a definition of teacher stress is necessary. Litt and Turk (1985) have defined teacher stress as the negative, unpleasant emotions that result from overwhelming problems in the teaching situation. Teachers may feel they do not have the ability to resolve these problems, and consequently, their well-being is threatened. Events that teachers find particularly stressful and that lead to job dissatisfaction include student verbal/physical abuse, inadequate preparation time, lack of resources, excessive paperwork, inadequate salaries, use of discipline with students, poor student attitude and motivation, large caseloads, lack of administrative support, lack of parental support, heavy work load, low status of the teaching profession, poor relationships among staff, and lack of advancement opportunities (Farber, 1984; Harris, Halpin, & Halpin, 1985; Kyriacou & Sutcliffe, 1977; Litt & Turk, 1985; Milstein, Golaszewski & Duquette, 1984; Olson & Matuskey, 1982; Raschke, Dedrick, Strathe, & Hawkes, 1985; Shaw, Keiper, & Flaherty, 1985).

While it is important to identify stressful events for teachers, it is also worthwhile to investigate the advantages of teaching and what keeps teachers in the profession. Although few studies are available on this topic, it appears that the most satisfying teaching experiences are those that make teachers feel sensitive and involved with students, as well as those that make them feel competent, important and committed to their jobs. The primary advantages of teaching come from the intrinsic benefits of working with children (Farber, 1984; Raschke et al., 1985). Examples of advantages identified by regular education teachers include, "I have dealt very effectively with problems of my students" and "I have felt I was positively influencing students' lives through my work." Another source of satisfaction is rewarding daily contact with colleagues during the school day, such as sharing professional ideas and providing support in dealing with difficult students, parents, and administrators. Summer vacations, student progress, and freedom to implement teaching strategies also are important advantages (Raschke et al., 1985).

Factors That May Influence Teacher Stress

Administrative support. Administrative support is a key factor in the degree of stress teachers experience. Overall, teachers indicate that they have little administrative support. About 30% of teachers report that they are supported by their principal and administrators (Farber, 1984; Fimian, 1986; Raschke et al., 1985). Fimian (1986) and Litt and Turk (1985) found a significant difference in stress levels between recipients and nonrecipients of supervisory/administrative support, with recipients experiencing less overall stress. Teachers complain that administrators often fail to support them in student discipline, fail to give feedback, and rarely consult teachers about the

instructional program. Teachers are more satisfied with their jobs when principals are sensitive to school problems, put teachers at ease, and take an interest in teachers' welfare and professional development (Farber, 1984; Litt & Turk, 1985).

Peer support. Peer support is another factor related to teacher stress, but one that apparently is more widely available to teachers than administrative support. Seventy-five to 90% of teachers indicate that they have rewarding contact and support from peers (Farber, 1984; Fimian, 1986). Fimian also found that recipients of peer support felt significantly less stress than nonrecipients, especially in the area of "professional distress," which includes stress about lack of advancement opportunities, professional status, control over school matters, on-the-job emotional stimulation, and inadequate pay. Apparently, peer support helps mitigate stress caused by factors that often are intrinsic to the teaching situation, such as low pay, low professional status, and lack of advancement opportunities.

Regular/special education. Another area that has received scant attention is the difference in stress between regular and special educators. In fact, no studies were found that addressed this issue. However, researchers have investigated differences in stress among teachers of students with various mildly handicapping conditions (LD, EMR, ED). Fimian, Pierson, and McHardy (1986), in a review of this literature, found that the results of studies comparing teachers of learning disabled, educable mentally retarded, and emotionally disturbed students were mixed. Some investigators found that teachers of LD students experienced less stress than teachers of ED and EMR students, some found that teachers of LD students experienced more stress, and

some found no differences among groups of teachers. Fimian et al. (1986) compared teachers of LD and other handicapped students (ED, EMR, Deaf/Blind) and found that the groups had similar job satisfaction levels. Though issues and events that caused stress were different for the two groups, teachers of LD students did not experience stress more strongly or more frequently than teachers of other students. Bensky, Shaw, Gouse, Bates, Dixon, and Beane (1980) investigated the relationship between degree of implementation of PL 94-142 and stress among regular, resource, and self-contained special education teachers. They found that as compliance with PL 94-142 increased, level of job stress also increased. Resource room teachers tended to experience more stress, and they viewed evaluation by supervisors, job-related work after school, and unclear role descriptions as more stressful than teachers in regular and self-contained special education classes. Zabel and Zabel (1982), in a comparison of special education teachers in various service delivery models, found that consulting teachers scored highest on indicators of stress, while itinerant teachers scored lowest.

Demographic variables. The relationship between teacher stress and demographic variables such as age, sex, and level of education also has been a topic of interest. In general, few demographic variables appear to be correlated with teacher stress. Milstein et al. (1984) found that the number of years teacning experience, education level, and grade taught were not significant correlates of stress. Farber (1984) found that teachers' perception of their work experience did not differ by sex, marital status, educational degree, number of years teaching, average number of children in the classes taught, or number of teachers in the school. Some differences were found for

tne age of the teacher and the grade level taught. Teachers in the 34-44 age range perceived themselves as more "burned out" and less commiited to teaching than teachers in the 45-65 age category. Farber, and also Zabel and Zabel (1982), found that junior high teachers tended to experience more stress than teachers at other grade levels. Zabel and Zabel found that older teachers and those with more teaching experience reported less "burnout" and a greater sense of personal accomplishment. Overall, these mixed results suggest that most demographic variables are not reliable predictors of teacher stress.

Parental/community support. The relationship between teacher stress and parental and community support rarely has been investigated. Results from the few available studies generally show that teachers feel a lack of parental support (Chase, 1985; Farber, 1984; Raschke et al., 1985). Chase, in a survey of 2000 teachers, found that teachers believe parents are not knowledgeable about the school and do not know the teacher. Teachers in this survey tended to feel receptive toward parents, but reported that parents were uninvolved in school activities. Farber (1984), in a survey of suburban teachers, found that only 5.7% frequently felt that parents made their lives easier; 66% felt that parents rarely or never made teaching easier.

Student achievement. One factor that is worth investigating in relation to teacher stress is student achievement. There is some evidence that teacher job satisfaction positively influences student grade aspirations, which in turn influence student achievement. Glasman and Biniaminov (1981) reviewed input-output analyses of schools that measured effects of a system's inputs (teacher job satisfaction) on school outputs (verbal, reading, and math scores on standardized achievement tests, student grade aspirations, and interest in school).

Teacher job satisfaction had a positive effect on each of these school outputs. Several investigators found stronger teacher effects on achievement than other school inputs, such as physical facilities, school programs and policies, and teacher salaries (Coleman, 1966; Mayeske, Wister, Beaton, Weinfeld, Cohen, Okada, Proshek, & Tabler, 1972).

Overall, a number of studies have been conducted on factors relating to teacher stress. Some methodological limitations, however, hamper the applicability of some findings. In addition to poor response rates in several survey-based studies, another issue in research design is whether quantitative or qualitative methods are used to study teacher stress (Blase, 1986). Most previous research has relied on quantitative methods, such as highly structured surveys, which may unnecessarily control a teacher's responses. Surveys may limit the types of stressors that can be discussed or limit explanations about causes, conditions, or consequences of stressful events. Exploratory research using open-ended methods rarely has been conducted. The results of this type of research are important, even though more difficult to analyze, because stressors are viewed from the teacher's perspective and not through the experimenter's biases.

In this study, qualitative, open-ended methods were used to survey regular and special education teachers' perceptions of stress and support in their environments, and to ascertain the relationship between teacher stress and achievement for mildly handicapped students. The research questions addressed were:

- To what extent are teacher demographic variables, category of students taught (LD, EBD, EMR), and district (urban, suburban) related to teachers' perceptions of parental support, administrative support, and advantages/disadvantages in teaching?

- To what extent are teacher demographic and job-related factors (parental support, administrative support, advantages/disadvantages in teaching, district, student category) related to stress in teaching in general and stress in teaching handicapped students?
- To what extent are teacher stress and teacher perceptions of the work environment related to achievement of LD, EBD, and EMR students?

Method

Subjects

Participants in this study were 35 regular education and 28 special education teachers. Teacher demographic data are presented in Table 1. All teachers taught mildly handicapped students (learning disabled - LD, emotionally/ behaviorally disturbed - EBD, and educable mentally retarded - EMR) for all or part of the school day. Achievement data were collected on 58 of these teachers' students (20 LD, 19 EBD, 19 EMR). All students received instruction in resource settings up to one-half day, with the exception of some EMR students who were served in self-contained classrooms. These 58 grade 2-5 students were a subset of 122 students from a larger study. Slightly over half of the students were male (n = 34, 58.6%); 24 students (41.4%) were female. Most students (n = 39, 67.2%) were caucasian; 27.6% (n = 16) were Black, and 3 (5.2%) were of an Asian or Native American ethnic background. Teacher interview and student achievement data were collected in 17 schools in an urban and a suburban school district.

Measures

Teacher stress/hassle. An open-ended, seven-item interview was developed to obtain information about the amount of stress experienced by individual teachers in teaching both handicapped and nonhandicapped students. Teachers

Table 1

Teacher Demographic Data

Demographic factor	Teacher	
	Regular	Special
Sex		
Male	5	1
Female	30	27
Years of Teaching experience		
$\bar{X}$	18	13
Range	1-35	2-30
Education level		
BA	5	2
BA + additional credits	14	14
MA	6	2
MA + additional credits	10	9
Ph.D.		1
Certification		
One area (LD, ED, EMR, regular)	32	9
Multiple areas	3	19

were asked about the advantages and disadvantages of teaching in general, and of teaching at their current school in particular. The interviewer also asked questions about school administrative leadership and the degree to which parents were supportive of teacher efforts and recommendations. Teachers rated, on a 1 to 5 scale, the amount of stress experienced in teaching in general. Teacher demographic information was collected at the same time.

Student achievement. The Basic Achievement Skills Individual Screener (BASIS) (Psychological Corporation, 1983) was administered to all students. The test is an individually administered, norm-referenced measure of achievement in reading, spelling and math. Test items reflect curriculum taught in grades 1 through 8.

Procedures

Students were considered potential subjects for this study if they met criteria for a larger study conducted concurrently (Ysseldyke, Bakewell, Christenson, Muyskens, Shriner, Cleary, & Weiss, 1988). After the list of potential subjects was generated, parents were sent a permission slip and teachers' agreement to participate in the study was obtained. Obtaining parent permission was a time-consuming, and in some cases, very difficult task. Of the 66 mildly handicapped students identified as potential subjects, parental permission was obtained via mail for 26 students; parental permission was obtained after follow-up (phone call, second letter) for another 32 students; parental permission was not obtained despite significant follow-up for three students, and five parents were unwilling to have their children participate.

Teacher interviews. Graduate assistants interviewed both regular and special education teachers for LD, EBD, and EMR students served in resource

rooms; only the special education teacher was interviewed for EMR students served in self-contained classrooms. The interviewer scheduled the interview time. In general, the teacher interview lasted 20 minutes. All interviews were conducted in the spring of the year. The interviewer asked seven open-ended questions, which included questions about the degree of stress experienced in teaching in general and in teaching handicapped students, and advantages and disadvantages of their work. No limitations were imposed on the numbers of advantages and disadvantages mentioned, nor on discussion of conditions in the teaching environment. In addition to the open-ended questions, teachers were asked to rate the degree of stress experienced on a five-point Likert scale, where "1" indicated "not at all stressful" and "5" indicated "extremely stressful."

Achievement testing. The BASIS was administered to students in the fall (October) and Spring (May).

Data Analysis

Data for this study were examined both descriptively and statistically. Upon completion of the interview, teacher responses were read and coding categories for the teacher-stated advantages and disadvantages were generated. Coding categories for perceived family and administrative support also were developed. These questions were coded on a 1-4 scale with "1" indicating a perception of very little support, "2" indicating not much support, "3" indicating some support, and "4" indicating very much support. Responses were then reread and scored. Inter-rater agreement was established by two independent raters on 20% of the sample (n=12). Inter-rater agreement for number of categories of advantages was 89.6% and disadvantages was 93.0%.

Means, standard deviations, and ranges were calculated for ratings of teacher stress, years teaching experience, and job-related factors (number of advantages, disadvantages, and perceived parental and administrative support). Correlations were computed between job-related factors (including district and student category) and demographic factors (sex, years teaching experience, educational degree, licensure, and teacher category). Correlations also were computed between these factors and general stress in teaching and stress in teaching handicapped students. Correlations were used to determine the relationship of teacher stress and job-related factors to student achievement for regular and special education teachers. Fall and Spring raw scores on the BASIS were used for reading, spelling, and math. In addition, gain scores were computed by subtracting Fall raw scores from Spring scores, and these also were correlated with teacher stress and job-related factors. For all correlations, data were missing for two teachers, and these teachers were dropped from the analyses.

Two-way analysis of variance was used to determine the influence of district and teacher category on teacher stress and job-related factors (advantages, disadvantages, parental, and administrative support). The same method was used to determine the relationship of teacher educational degree and teacher category with teacher stress and job-related factors.

Results

Descriptive Analyses

Teacher stress and job-related factors. Means, standard deviations, and ranges for teacher stress and job-related factors are presented in Table 2. In

Table 2

Means, Standard Deviations, and Ranges for Regular and Special Education Teachers on Teacher Stress, Job-related Factors, and Years Teaching Experience

	Regular Education			Special Education		
Category/Dimension	M	SD	Range	M	SD	Range
Stress in teaching	2.94	1.11	1-5	2.50	.75	1-4
Stress in teaching handicapped	2.77	1.16	1-5	2.46	.88	1-4
Number of advantages	4.09	1.50	2-8	4.14	1.51	2-8
Number of disadvantages	4.63	1.90	1-9	4.25	1.48	1-7
Parental support	2.83	1.01	1-4	2.67	1.14	1-4
Administrative support	3.49	.89	1-4	3.25	1.11	1-4
Years teaching	18.40	8.77	1-35	13.29	6.99	2-30

general, regular and special education teachers reported a moderate level of stress for teaching in general, with regular education teachers reporting slightly more stress than special education teachers, though the difference was not significant. Mean ratings of stress in teaching handicapped students also were in the moderate range for both groups. For job-related factors, regular and special education teachers mentioned approximately four advantages and disadvantages of their jobs. The number of reported advantages ranged from 2 to 8, while the number of reported disadvantages ranged from 1 to 9. Teachers' perceptions of parental support were fairly low. On a 1-4 scale, mean ratings of parental support were 2.83 and 2.67 for regular and special education teachers, respectively. A "2" on the scale indicates "not much support" and a "3" indicates "some support." Ratings of perceived administrative support were fairly high for both groups of teachers (3.49 for regular education, 3.25 for special education).

Advantages in teaching. Information on advantages and disadvantages in teaching came from open-ended questions; no structure or guidance as to the nature of the answers was given. Teachers' open-ended responses were coded for analysis. For regular education teachers, relationships with administrators, colleagues, and parents were rated as the most important advantages to their jobs. Eighty percent of regular education teachers mentioned that the philosophy of the school, the administration, and the principal were important aspects of their job satisfaction; 59% mentioned parental support and 56% mentioned staff and colleague relationships. Many regular education teachers also believed that flexibility (49%) and variety within the staff and student body (41%) were important advantages to their jobs.

Relationships with colleagues (89%) and support from administrators (86%) were also important advantages for special education teachers. Flexibility in planning and delivering instruction also was mentioned by many teachers (55%), followed by the number of students in the class (30%) and parental support (27%).

Disadvantages in teaching. For regular education teachers, the most frequently mentioned disadvantage was the time and schedule of school events (78%). This included adequate time to teach academic material, adequate preparation time, and blocks of time for instruction uninterrupted by student movement to several classrooms/teachers during the day. A large portion of regular education teachers (76%) also reported disadvantages related to student characteristics and concerns that the teacher had to deal with in the classroom. Examples included poor attitudes and motivation, behavioral/emotional problems, slow academic progress, poor attendance, and a transient school population. Many regular education teachers (63%) mentioned that overcrowding in the classroom and/or school was a negative factor. Two other frequently mentioned disadvantages were lack of parental support (41%) and frequency of non-academic tasks and interruptions (32%), such as paperwork, meetings, and bookkeeping.

Disadvantages mentioned most frequently by special education teachers included staff and colleague relationships (63%), student characteristics and concerns (52%), non-academic tasks and interruptions (50%), the time and schedule of the school day (50%), and variety within the staff and student body (34%).

Correlations of demographic and job-related factors. The correlations between demographic and job-related factors are reported in Table 3. In this

Table 3

Correlations Between Demographic and Job-related Factors

Demographic and Job-Related Factors	Demographic Factors					Job-Related Factors					
	Sex	Years Teaching	Degree	Licensure	Teacher Category	Student Category	District	Advantages	Dis-advantages	Family Support	Administrative Support
Sex	—	-.24	-.35*	.04	.18	.20	.03	-.05	.25	-.13	-.20
Years Teaching		--	.31*	-.21	-.31*	-.30*	-.17	.05	-.17	-.05	.15
Degree			--	.03	.07	.01	-.29	-.18	-.15	.13	.15
Licensure				--	.38*	.31*	-.12	.03	-.08	.21	.11
Teacher Category					--	.25	-.01	.02	-.11	-.08	-.12
Student Category						--	.21	-.14	.15	-.06	-.34*
District							--	-.23	.14	-.15	-.35*
Advantages								--	-.04	.12	.19
Disadvantages									--	-.04	-.27
Family Support										--	.13
Administrative Support											--

NOTE: N = 61 * $p < .01$ ** $p < .001$

sample, teacher gender was negatively correlated with academic degree; male teachers in this sample were more highly educated. Number of years teaching experience was positively correlated with degree (i.e., teachers with more experience had higher educational degrees), and negatively correlated with teacher category (regular education teachers had more teaching experience than special education teachers). Teachers of LD students had more experience than teachers of EMR students. Special education teachers had licensure in multiple areas more frequently than regular education teachers, and teachers of EMR students had multiple licensure more frequently than teachers of LD students. For administrative support, teachers of LD students perceived more administrative support than teachers of EMR students, and teachers in the suburban district perceived more support than teachers in the urban district.

What Accounts For Teacher Stress?

Correlations of demographic and job-related factors with teacher stress factors are reported in Table 4. General stress in teaching was correlated positively with teacher gender. Female teachers in this study tended to experience more stress in teaching in general. General stress was correlated negatively with educational degree ($p < .01$) - the higher the teacher's degree, the less stress experienced. General stress also correlated positively with number of disadvantages listed ($p < .001$). Finally, general stress in teaching was correlated positively with the level of stress experienced in teaching handicapped students ($p < .001$).

Two-way ANOVAs were conducted on job-related and teacher stress factors by district and teacher category (reported in Table 5). Regular and special education teachers in urban and suburban settings did not differ in the number

Table 4

Correlations of Teacher Stress with Demographic and Job-related Factors

Demographic and Job-related Factors	General Stress in Teaching	Stress in Teaching Handicapped Students
Sex	.30 *	.20
Years Teaching	-.10	-.17
Degree	-.34 *	-.17
Licensure	-.08	.003
Teacher Category	-.23	-.14
Student Category	-.09	-.01
District	.09	.13
Advantages	-.07	.002
Disadvantages	.39 **	.36 *
Family Support	-.12	-.04
Administrative Support	.08	-.09
Stress in Teaching	---	.49 **
Stress in Teaching Handicapped	.49 **	---

NOTE: * $p < .01$, ** $p < .001$

Table 5

Mean Squares, F Ratios and p Values for Two-Way ANOVAs by District and Teacher Category

Category/Dimension	MS	F(1,58)	p<
Number of Advantages			
District	6.26	2.90	.09
Teacher Category	.004	.002	.97
Interaction	3.45	1.60	.21
Number of Disadvantages			
District	2.78	.93	.34
Teacner Category	1.84	.62	.44
Interaction	2.33	.78	.38
Stress in Teaching			
District	.15	.18	.68
Teacher Category	2.41	2.80	.10
Interaction	5.60	6.49	.01 **
Stress in Teaching Handicapped			
District	.42	.42	.52
Teacher Category	1.62	1.62	.21
Interaction	4.85	4.86	.03 *
Perceived Parental Support			
District	1.32	1.13	.29
Teacher Category	.57	.48	.49
Interaction	.15	.13	.72
Perceived Administrative Support			
District	8.20	9.41	.003 **
Teacher Category	.76	.87	.35
Interaction	.90	1.03	.31

NOTE: * $p < .05$, ** $p < .01$, *** $p < .005$

of advantages and disadvantages they found in their work, perceived parental support, or level of stress in teaching handicapped students. For teacher self-reports of general stress in teaching, district and teacher category analyses were insignificant, but a significant interaction between district and teacher category was obtained. Post-hoc tests using the LSD procedure at the .05 level of significance indicated that urban regular education teachers reported higher levels of general stress ($\underline{M}$ = 3.26) than suburban regular education ($\underline{M}$ = 2.56) and urban special education teachers ($\underline{M}$ = 2.27). Teachers' perceived administrative support was significantly different across districts; no differences were noted for teacher category or the interaction of district and teacher category. Post-hoc contrasts indicated that urban special education teachers perceived less administrative support ($\underline{M}$ = 2.80) than suburban regular education ($\underline{M}$ = 3.75) or special education teachers ($\underline{M}$ = 3.77). Tnough not significant, urban mainstream teachers ($\underline{M}$ = 3.26) also perceived less administrative support than suburban teachers.

Two-way ANOVAs also were conducted on job-related and teacher stress factors by educational degree and teacher category (see Table 6). Teachers in tnis sample did not differ, by degree or teacher category, on number of advantages in their work, perceived family and administrative support, or stress in teaching handicapped students. Differences were found in number of disadvantages reported as a function of degree. Teachers with a bachelor's degree or bachelor's degree plus additional credits reported more disadvantages than teachers with advanced degress (masters, masters plus credits, and doctorate). For general stress in teaching, analyses by teacher category were insignificant, but analyses by degree and the interaction of degree and teacher

Table 6

Mean Squares, F Ratios and p Values for Two-Way ANOVAs by Education Level and Teacher Category

Category/Dimension	MS	F(1,58)	p<
Number of Advantages			
Degree	1.90	.83	.37
Teacher Category	.01	.003	.96
Interaction	3.48	1.52	.22
Number of Disadvantages			
Degree	12.45	4.39	.04 *
Teacher Category	1.79	.63	.43
Interaction	1.58	.56	.46
Stress in Teaching			
Degree	6.19	8.02	.006 **
Teacher Category	2.29	2.97	.09
Interaction	3.69	4.78	.03 *
Stress in Teaching Handicapped			
Degree	2.72	2.57	.16
Teacher Category	1.35	1.28	.26
Interaction	.57	.54	.47
Perceived Parental Support			
Degree	3.16	2.79	.10
Teacher Category	.31	.27	.61
Interaction	.31	.27	.61
Perceived Administrative Support			
Degree	2.75	2.88	.10
Teacher Category	.54	.57	.45
Interaction	.05	.06	.81

NOTE: * $p < .05$, ** $p < .01$

category were significant. Post-hoc tests indicated that mainstream teachers with a bachelor's degree or bachelor's degree plus additional credits experienced more general stress than teachers in the other three categories: special education teachers with a bachelor's degree, and special education and mainstream teachers with a master's degree or higher.

Relationship of Teacher Stress and Job-Related Factors to Student Achievement

Correlations of teacher stress and job-related factors with student achievement for regular and special education teachers were completed (see Table 7). Student achievement was measured by Fall, Spring, and gain scores in math, reading, and spelling. The only significant correlation was between regular education teachers' ratings of general stress in teaching and Fall math scores. All other correlations of general stress in teaching with achievement scores were nonsignificant for regular and special education teachers.

Discussion

The purpose of the present study was to investigate regular and special educators' perceptions of stress in their environment, factors related to teacher stress, and the relationship between teacher stress and student achievement for mildly handicapped students. Several interesting findings emerged. In general, regular and special education teachers reported a moderate level of general stress in teaching and stress in teaching handicapped students. They reported little support from parents, but, in contrast to previous studies (Farber, 1984; Fimian, 1986), reported fairly high administrative support. The major perceived advantages for teachir were similar for regular and special education teachers -- support from administrators, relationships with

Table 7

Correlations of Student Achievement with Teacher Streas and Job-related Factors for Regular and Special Education Teachers

	Regular Education Teachers (n = 35)									Special Education Teachers (n = 28)								
	Fall Math	Fall Reading	Fall Spelling	Spring Math	Spring Reading	Spring Spelling	Gain-Math	Gain-Reading	Gain-Spelling	Fall Math	Fall Reading	Fall Spelling	Spring Math	Spring Reading	Spring Spelling	Gain-Math	Gain-Reading	Gain-Spelling
Number of Advantages	.25	.26	.36	.24	.19	.38	.01	-.16	.20	.22	.18	.21	.20	.15	.12	.06	-.02	-.14
Number of Disadvantages	.08	.24	.20	.25	.34	.12	.20	-.10	-.25	-.12	.04	-.20	.14	-.13	-.24	-.12	-.26	-.22
Stress in Teaching	-.40*	-.22	-.27	-.27	.06	-.30	.10	.18	-.10	-.10	.02	-.23	-.21	-.08	-.22	-.32	-.20	-.19
Stress in Teaching Handicapped	-.20	-.15	-.15	-.001	.17	-.21	.30	.22	-.02	.28	.19	.16	.28	.22	.16	.09	.05	.07
Perceived Family Support	.14	-.03	.06	-.02	-.09	-.09	.02	.11	.14	.07	.08	-.08	.003	-.14	-.18	.02	-.26	.01
Perceived Adminiatrative Support	-.002	-.04	.04	-.15	-.26	-.06	-.09	-.21	.06	.21	.10	.19	.10	-.08	.17	-.13	-.29	.04

NOTE: * $p < .01$

colleagues, and flexibility. Disadvantages in teaching also were similar for the two groups, with some exceptions. Common perceived disadvantages were the number of interruptions and nonacademic tasks that had to be attended to during the school day, dealing with student academic and behavioral problems in the classroom, and lack of time for teaching academic material and for preparation of lessons. Regular educators also frequently mentioned overcrowding in the classroom and lack of parental support as important disadvantages. Special education teachers believed that variety within the staff and student body (seen as positive by regular education teachers) and relationships with colleagues were important disadvantages to their jobs.

Several factors appear related to teacher stress. In this study, female teachers reported more stress than males. This finding must be interpreted with caution, however, due to the small number of male teachers in the sample (N = 6). Similarly, the finding that male teachers in this sample were more highly educated also must be interpreted cautiously. The district in which one teaches may influence factors related to and the amount of stress experienced. In this study, teachers in the suburban district perceived more administrative support than urban teachers. District effects also interacted with teacher category. It was found that urban regular education teachers experienced higher stress than suburban regular education and urban special education teachers. Only two districts participated in this study, however, and therefore it is difficult to determine whether the results reflect differences specific to the two districts or actual differences between urban and suburban settings. Perhaps more research is needed on differences in stress experienced by teachers in urban and suburban settings.

Several other factors may influence the amount of stress experienced. In this study, the higher the educational degree, the less stress experienced. Educational degree also interacted with teacher category; regular education teachers with a bachelor's degree experienced more general stress than special education teachers with a bachelor's degree and special and regular education teachers with a master's degree or higher. General stress in teaching was highly correlated with reports of stress in teaching handicapped students. Similarly, the number of disadvantages mentioned was positively correlated with reports of general stress.

Several general themes emerged from teachers' reports of stress and conditions in their working environments. First, it appears that the conditions of teaching are not always satisfying. Teachers find that many nonacademic tasks, such as paperwork, meetings and bookkeeping, and frequent interruptions take precious time away from teaching academic lessons. Throughout the day, a large number of students move in and out of the classroom to attend a variety of special programs. This leaves few blocks of time available for instruction of all students and necessitates that teachers keep track of many different class schedules and academic assignments. This is in addition to the large number of demands placed on teachers; Jackson (1968) estimates that teachers make as many as 1,300 decisions a day. They make decisions before, during, and after teaching, such as what to teach, what materials and activities to use, how to modify instruction during the lesson to accommodate student performance, behavior and involvement, how to evaluate the lesson, and what subsequent planning is necessary. An added pressure to these classroom demands is the fact that teachers believe parents often do not support their decisions or try to impart the value of education to their children.

When presented with data on what factors decrease teachers' enjoyment of their work, a choice can be made by school personnel. Either the conditions of teaching can be accepted as "the way it is" in teaching, with few attempts made to change the situation, or resources can be devoted to making the conditions of teaching as good as possible. While many factors influence teachers' decisions to leave the profession, the fact that 41% do so within four years (Farber, 1984) suggests a need to re-examine the conditions of teaching. The findings of this and other research indicate possible ways to improve teaching conditions. Support from administrators, colleagues, and parents in the teaching environment is especially important. Based on research by Litt and Turk (1985) and Farber (1984), it appears that school principals and administrators can take several steps to decrease teacher stress. These steps include setting firm discipline policies and supporting teachers in the implementation of these policies, giving feedback about teaching performance after evaluations, consulting with teachers about the instructional program, and taking an interest in teachers' welfare and professional development.

Many teachers receive informal collegial support, but more formal approaches such as Teacher Assistance Teams (Chalfant, Pysh, & Moultrie, 1979) or intervention assistance programs (Zins, Curtis, Graden, & Ponti, 1988) may provide additional support and ideas for dealing with student problems in the classroom. Teachers and consultants also can work together to decrease stress-producing conditions in teaching, such as limiting interruptions not under teacher control, including PA announcements and classroom visitors; scheduling adequate preparation time as part of the school day; and arranging the school schedule to provide blocks of instructional time uninterrupted by student

movement to other classrooms during the day. Teachers and consultants also could work to promote better home-school cooperation and understanding. These suggestions are supported by the finding that teachers who receive more external support from administrators, parents, and other teachers report less "burnout" and a higher sense of personal accomplishment (Zabel & Zabel, 1982).

A second theme gleaned from the results is the similarity in conditions of teaching for regular and special educators. Both groups report similar levels of general stress and stress in teaching handicapped students, similar advantages and disadvantages, and comparable amounts of administrative and parental support. The two groups may have somewhat different job roles, but both experience job-related demands and stress. This finding offers support for the notion that teaching is teaching, regardless of the setting in which it occurs. Regular and special educators probably would benefit from greater appreciation of the contributions of each other, and from greater cooperation, especially in planning instruction for mildly handicapped students.

It was expected that stress experienced by regular and special education teachers would influence achievement of learning disabled, emotionally/behaviorally disturbed, and educable mentally retarded students. However, no relationship was found between teacher self-reports of job-related factors and stress, and student achievement. Few studies have been conducted on this topic, but the available results indicate that teacher job satisfaction positively influences student achievement and interest in school (e.g., Glasman & Biniaminov, 1981). A possible explanation for the nonsignificant finding of this study is that the achievement measure used (BASIS) may not be sensitive to changes in achievement over the course of a school year. Also, the qualitative

design necessitated a more descriptive approach to data analysis. While not investigated in this study, it also is possible that teacher stress influences student attitudes more than it does academic achievement.

Empirically sound research on teacher stress is still in the preliminary stages. Overall, teachers in this study experienced moderate stress, with some experiencing much more and some much less stress. The optimal level of stress for best teaching performance is presently unknown, however. We also lack normative data on stress experienced in teaching; we do not know the amount of stress teachers typically experience. Research is needed in several additional areas, including effects of teacher stress on student attitudes and achievement, differences in stress experienced by urban and suburban educators, differences in stress between regular and special educators, and effects of parental support on teacher stress. One interesting approach would involve locating teachers who would be expected to be experiencing much stress but are not, and determine what factors contribute to this resiliency. All research on teacher stress should lead to a better understanding of factors that cause decreased enjoyment of teaching and ways to improve the educational environment such that teachers and students alike have a positive experience in school.

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