A comparative study of stress and coping skills among learning disabled and regular education students

Natalie R. Davenport

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A comparative study of stress and coping skills among learning-disabled and regular education students

Davenport, Natalie Ruth, Ph.D.

Iowa State University, 1991
A comparative study of stress and coping skills among learning disabled and regular education students

by

Natalie R. Davenport

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education
Major: Education

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

For the Major Department

Signature was redacted for privacy.

For the Graduate College

Iowa State University
Ames, Iowa

1991
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CHAPTER I. INTRODUCTION

Statement of the Problem

Grant is a ten-year-old fifth grade student at an elementary school in the southwestern United States. Until recently, he has performed as an average student in his class. Suddenly, however, he has begun to exhibit a decreased effort in school. He has also become withdrawn and complains of fatigue and illness constantly. Often during independent seatwork, Grant falls asleep at his desk. When he is not dozing, he is daydreaming. Any attempt by the teacher to discuss his behavior is met with empty looks.

Ruth is a nine-year-old fourth grader at a midwestern elementary school. She has always been an ideal student. Her teacher has noticed that of late Ruth cannot be satisfied by her classroom accomplishments. She is working harder than ever, but does not seem to be satisfied with the finished product. Ruth is constantly demanding the attention of her teacher in her quest for perfection and appears to be intolerant of her once cherished friends. Each of her many attempts to complete a project to her satisfaction often concludes with a sigh, a trashing of her work, and an incomplete assignment.

What do these children have in common? According to Rubenzer (1988), Honig (1986), and Gould (1987), each of these students is exhibiting telltale signs of stress-related behavior. Because children, like all human beings, are unique, stress manifests itself in a variety of ways.
Some stress-related events may be facilitators for growth and development of coping mechanisms in the young child and adolescent (Chandler, 1986). However, when a child's resources are strained, efforts to compete may not only be ineffective, but also counterproductive in that they may affect health and impair school performance. According to Proeger and Myrick (1985), 30% of students in school are suffering from the learning-impairing stress. Therefore, it would appear that recognizing telltale signs of stress in children would be an important skill for teachers to possess.

Currently, there are a number of researchers investigating stress in children of various ages and cultures (Yamamoto & Byrns, 1984; Yamamoto & Davis, 1982; Honig, 1986; D'Aurora & Fimian, 1988). However, the majority of the literature investigating stress in children has been conducted using students from the regular education population only. Though researchers have alluded to the idea that school factors contribute to stress in LD children, little research has been conducted including these students as subjects (Rubenzer, 1988).

Significance of the Study

Children and stress

Stress in children is difficult to research (Honig, 1985). In a child's life, there are a wide variety of stimuli that are potentially stressful. Moreover, as in adults, the intensity and duration of the situation or the interaction of a variety of stressors may vary greatly in its effect on children. Stress can arise from internal factors or
external factors. It can also be acute, or chronic internal factors causing stress in children may include an illness such as measles. External factors may include a recent family move and changing schools. Acute stress is that which arises suddenly, is an isolated impact, and does not usually last long. Chronic stress, on the other hand, may be cumulative, even for well-adjusted children, and can lead to long-term disturbances.

Stress is a integral part of our complex society. Most children encounter stress as they grow and develop. Each child, as do all persons, has a "zone of tolerance" level when dealing with stress (Chandler, 1985). If stress becomes considerably greater than the tolerance level of the child, he/she will undoubtedly have physiological and behavioral manifestations as reactions to the situation.

Factors inducing stress in children

Home factors Home stressors occur in the most normal families. An event such as illness of a parent or sibling would likely cause stress for children. Divorce is another family event that will cause stress in a child. Studies show that it is rated highly (Yamamoto, 1987; Coddington, 1983). Finally, abuse is a factor that causes stress for children. This includes physical, sexual, or emotional abuse. The abuse is a stressor in that it affects the child’s ability to maintain equilibrium in his or her life. These and other home stressors are difficult to deal with because the child, in most cases, cannot be removed from the setting where the stressors are occurring.
School factors

School-related stress is the most prevalent untreated cause of academic failure in our schools. Barker (1987) states that this type of stress may afflict six to ten million children per year. There are several types of stress in the educational system children encounter as they grow which would fall under this heading. Separation anxiety may be one of the first possible stress-inducing factors that is related to school (Humphrey & Humphrey 1985). Depending on previous experience, however, most children have overcome this by the time they enter school. Test anxiety may be a major stress-inducing factor in school children. If children are not able to effectively control this anxiety, it may hamper their academic performance.

Additional stress-producing factors have been identified by Helms (1985) and Fimian (1985) in their models of school stress. Helms identifies teacher interactions, peer interactions, and one's academic self-concept as potential stressors. He states that those students experiencing difficulties in these areas may display emotional, behavioral and physiological disturbances. Fimian places factors that may induce stress in children into three categories. Social/academic problems are those such as power over the student, parental pressure, and the ability to deal with excessive amounts of information. Student distress may include nonacceptance by peers, inability to make friends easily, inability to learn effectively, inadequate amount of leisure time, and poor grades. Finally, poor instructional relations arise when there is difficulty in communicating with the instructor, classroom disruptions, and loneliness.
The learning disabled child

For the LD child, along with the aforementioned stressors there are additional sources of school stress. According to Elkind (1981), these arise from placement into special education, academic difficulties, and inappropriate social skills often exhibited by the LD student. In addition, Elkind states that LD children might be at particular risk for stress due to frustration stemming from insensitivity, self-concept confusion, dependency, labels, and hesitancy on the part of the student.

First, significant others to LD children in the academic environment, such as administrators and regular educators, may be insensitive to the problems encountered by this unique group of children. Often, they treat these children as if they will not perform, when in fact they cannot perform at their ability level.

Self-concept confusion results from the ability differences within an individual child. The student may be able to keep up with the class in some modes and display discrepantly poor academic performance in other modes. Dependency occurs on the part of the student to the special education teacher for academic survival, as university training has often taught the special educator to be aware of the unique needs of the LD student and to provide additional support with academic and social challenges that the child faces in the school environment.

Anxiety may occur in this instance if the child is mainstreamed; in many cases, this support is taken away as regular educators are not always aware of the additional needs of the student and are not
equipped with the skills to meet the student’s needs. Labeling may be one of the main sources of stress for the special education student, as it may cause isolation and rejection by peers. Finally, many LD students exhibit hesitancy to ask clarifying questions because of the fear of drawing further criticism. Thus, students are often left confused about the instructional information. These frustrations magnify the achievement stress for LD students and place them at particular risk for stress-related underachievement (Elkind, 1985).

The stress levels of learning disabled students will be compared to the stress levels of achieving peers. This will be conducted to detect if there is additional stress among learning disabled students. If differences in stress levels are detected, determining if the levels increase as a function of grade will be significant to this study.

In addition to comparing stress levels of these two groups, coping skills will also be identified. These will be examined to detect if students with a greater amount of stress have coping skills that differ from those of students exhibiting less stress.

Research Question

The research question for this study asks, is there a difference between stress levels and coping skills of learning disabled and regular education students? Also, (a) are stress levels related to gender, and (b) are stress levels related to coping skills?
Definitions

The following are operational definitions used in this study:

1. **Regular education students** - Those students enrolled in regular education in fourth through eighth grade that have not been identified as needing special education.

2. **Learning disability** - A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. These problems are not primarily due to visual, hearing, or motor handicaps, mental retardation, emotional disturbances, or of environmental, cultural, or economic disadvantage (Hallahan & Kaufman, 1986).

3. **Learning disabled resource students** - Those students identified as learning disabled by their school systems and receiving services from the resource room teacher.

4. **Stress** - A nonspecific stimulus which causes the body to mobilize defenses in order to maintain a state of balance between himself or herself and the environment.

5. **Stressor** - An acute life event or chronic environmental situation that causes disequilibrium (Honig, 1985).

6. **Coping skills** - Strategies used by the student to mobilize body resources to enable them to deal with those factors taxing or placing excessive demands on the body.
Limitations

The following are seen as limitations of this study:

1. This study will include schools in one midwestern state, and should be taken into account when generalizing results to other students in other states.

2. Learning disabled students will be identified according to school criteria only.

Assumptions

The following assumptions were made:

1. It is assumed that the readability level of the instruments used will be appropriate for students selected as subjects in the regular education classroom.

2. It is assumed that all students will complete the instruments to the best of their ability.

3. It is assumed that all students are under some degree of stress.

4. It is assumed that students have developed some form of coping behavior.
CHAPTER II. REVIEW OF LITERATURE

Evidence suggests that high stress behavior patterns are formed very early in life. According to Elkind (1981), many young children are establishing a stressed life early. This may be due to the fact that today’s children are bombarded by multiple messages that require endless choices on their part (Swick, 1987). Moreover, these children are facing many experiences with ineffective coping skills and problem-solving abilities.

How a child perceives stressful situations, prior experiences, and support systems are determinants of one’s ability to cope in a stressful environment such as school. If s/he is adept at confronting and coping with stressful encounters, these experiences may be facilitators for growth. However, if a child’s coping resources fall short of stressful demands, the ability to cope is hampered and atypical behavior may result.

Considerable research has been generated in the area of stress, and more recently its effect on children (Yamamoto, 1986; Chandler, 1985; Humphrey, 1988). The first section of the present chapter reviews some of this literature. The second section of this chapter will review literature pertaining to stressors in children, in regular and special classes, in the school environment.

How well a child is prepared to cope and how s/he copes with stress are essential components to investigate when studying stress in children.
For this reason, the final section of this chapter will review literature on coping skills employed by children.

The Phenomenon of Stress

There is no standard meaning for the word stress (Humphrey & Humphrey, 1985). Consequently, there is a great deal of confusion surrounding its interpretation. Therefore, for purposes of understanding the nature of stress and related studies, it becomes necessary to review some of the terminology that is commonly used in studies conducted to investigate stress-related behavior.

Anxiety has often been used interchangeably with the word stress. A basic literal meaning of the term is uneasiness of mind. It has also been thought that anxiety is a precursor to stress and is caused by fear of harm or danger (Humphrey & Humphrey, 1985).

Tension is also often used in relation to stress. Tension is defined as unnecessary or exaggerated muscle contractions which could be accompanied by abnormally great or reduced activities of the internal organs. Tension can be thought of as learned or unlearned. Unlearned tension would be a tensing reaction from bright lights. Learned tension is that which causes a tensing reflex from a stimulus that would not normally evoke a tensing response. An example would be an inability to relax while flying because of fear of a plane crash.

Humphrey and Humphrey (1985) state that the major difference between stress and tension is how it brings about wear and tear on the body. Stress is a physical and/or mental state concerned with wear and tear on
the body, while tension is either a spontaneous or latent condition that can help to bring about this wear and tear.

There have been several definitions proposed for the term stress. Hans Selye (1978), in his book *The Stress of Life*, defined stress as the wear and tear on our bodies by the very process of living. According to this definition, stress involves a mobilization of the bodily resources in response to some sort of stimulus.

Herfeld and Powell (1986), in their manual which provides instruction for children on controlling stress, defined it as the body's nonspecific response to the demands made upon it. Stress is a result. Something can produce stress without actually being stress and can be positive or negative. The same nonspecific response of the body to adjust to the situation may result from either. Examples would include anger, pain or embarrassment.

Arent (1984) defines stress by dividing it into two parts, "good stress" and "painful stress." Good stress is the pressure or emotional condition that inspires children. It motives one to maintain a positive attitude. This may be manifested by excelling in a sports activity, completing a difficult lesson, or undertaking a challenging new activity. Painful stress is the emotional condition that one feels when it is necessary to cope with unsettling, frustrating, or harmful situations. It creates a disturbing sense of helplessness. Moreover, it is uncomfortable and can create uncertainty and self-doubt.

Because of the interchanging of stress-related terms and the inability of consensus for a global definition, Lazarus (1966) suggested
using stress as a generic term for the whole area of problems including
the stimuli producing stress reactions, the reactions themselves, and the
various intervening processes. Lazarus concludes, "Stress is not
stimulus, response, or intervening variable, but rather a collective term
for an area of study" (p. 27).

Stress is a universal human and animal phenomenon, results in
intense and distressing experiences and appears to be of tremendous
influence on behavior (Lazarus, 1966). Consequently, whether stress is
being defined as a general syndrome encompassing many elements or a
specific response resulting from emotional and psychological stimuli, it
is clear that further research in this area is warranted.

Stress in Children

Childhood stress is at epidemic proportions (Kuczen, 1987). Today's
child has become the unwilling, unintended victim of overwhelming stress—
that borne of rapid bewildering social change and constantly rising
expectations (Elkind, 1985). In our society, children are growing up
much faster. They are facing new and more serious decisions at much
earlier ages. In addition, they are constantly trying to live up to the
expectations and demands of parents, teachers, peers, and society (Omizo,
Omizo & Suzuki, 1988).

In addition to the stressors of society, children have numerous
self-concerns which may produce stress (Chandler, 1985). These concerns
may evolve around self-esteem, changing values, social standards,
personal competence and ability, and personal characteristics and traits.
First, due to social status, a child may feel that certain opportunities afforded to more fortunate individuals are not available to him/her. Second, at various stages of growth, children may have concerns about the value systems being placed on them, whereas they may feel that certain factors valued by them may not be by their parents. Third, there is an increasing lack of self-confidence experienced by many children. Often children may lack the ability or confidence needed to meet demands placed on them by parents and society. Finally, one of the main concerns that children may have during the course of growth and development is that of personal traits and characteristics. These may include physical deformities or mental abilities that differ from students in their age group. Children want to be like their peers. When they deviate radically from their peers in certain traits and characteristics, it can be a serious stress-inducing factor.

As mentioned previously children encounter a considerable amount of stress in our society. The greatest problem associated with this fact, however, is that they are not likely to be able to cope with it as well as adults. This is primarily due to the fact that children have less control over their world than adults, and their adaptive mechanisms and strategies are less well-developed (Herbert, 1983). Whereas adults may understand when their bodies are reacting to stress, children most likely do not.

There are a variety of ways open to adults of responding to stress. The options available to children, however, are much more limited. Margaret Holland, a prominent child psychologist, makes the following
comparisons between choices in coping with stress open to adults and children (Margaret Holland, 1980 as stated in Humphrey, 1988).

1. An open display of anger is often considered unacceptable for children. A teacher can be angry with a student, but a student cannot return that anger.

2. Adults have the option of withdrawing or walking out, but this same option of freedom may not be available to children.

3. It is the belief that daydreaming is therapeutic and productive. At the same time, children may be reprimanded for daydreaming in school.

4. An adult can get a prescription for "nerves" from a physician—another option not available for children.

Because of the aforementioned circumstances, children may often be punished for using some of the same types of coping responses exhibited by adults. They may often be considered inappropriate or socially unacceptable as far as children are concerned. Since stress is a very real phenomenon for children, however, it is imperative that significant adults in the child's environment assist them in developing appropriate coping techniques.

School-related stressors

For many children, especially those who are gifted and talented, attending school provides an opportunity for fun, excitement, thrills, and pleasures that foster a sense of achievement and belonging. For others, however, school itself is a stressful situation. Indeed, there are a number of situations existing in many schools that are stressful
for children. These include gender differences, subject matter, test
anxiety, and teacher behavior.

**Gender differences**  Male children are more vulnerable to stress
than female children (Honig, 1986). In a study of metropolitan child
care centers serving low income families, male toddlers made
significantly more distress bids than females from their caregivers
(Honig & Whittmer, 1982). Also, certain stressors may differentially
affect boys and girls. After two years of study of 48 nursery school
boys and girls of divorced families, the male children were still
experiencing adjustment problems (Hetherington, Cox, & Cox, 1978). In
addition, Helms (1985) suggested that male and female students differ in
the way they perceive and experience stress. According to this author,
boys display more behavioral manifestations, while girls experience more
emotional and physiological manifestations.

**Subject matter**  Certain subjects have been stressful for many
students, young and old. Probably the greatest subject which evokes a
stressful response in students is that of mathematics. This usually
extends from basic arithmetic in early elementary school through the
advanced mathematics courses required by most colleges and universities.
Tobias (1981), a prominent researcher in the area commonly termed "math
anxiety," summarizes some of her thoughts on this growing area of study.
She states that there are "math anxious" and "math avoiding" people.
Many of these individuals who are not necessarily ill-equipped to deal
with situations involving mathematics shy away from any experiences
involving it as they do not trust their problem-solving abilities. Thus,
they experience high levels of anxiety when confronted with such a situation.

In general, people carry very distinct memories of early math experiences, and most of these experiences are likely to be school-related. Long after leaving a classroom situation, many individuals experience anxiety when confronting mathematics.

Test anxiety Test anxiety has long been recognized as a situation in which most people experience anxiety, especially children. This type of anxiety has also been associated with IQ level. Sarason (1960) reviewed and found that the majority of studies showed that general anxiety was not related to IQ, whereas high test anxiety was. Dodds (1976) explored the relationships between IQ and test anxiety with 150 7th graders. He found a negative relationship between test anxiety and IQ. Hill and Sarason (1966), in longitudinal studies of test anxiety, supported the relationship of IQ to test anxiety. Their studies revealed that the negative correlation between test anxiety and IQ is small during the first year but tend to increase significantly in a negative direction over time. Thus, Humphrey and Humphrey (1985) suggest that the reactions of children that give evidence to emotional disturbance in relation to tests be carefully considered, especially when test results are interpreted and used for instructional, guidance, and administrative purposes.

Teacher behavior Educators and teachers alike are often faced with the challenge of working with a child under stress or one exhibiting behaviors which are a result of ineffective coping skills. What teachers
are often unaware of, however, is that their very presence and behaviors may contribute to the stress children are experiencing in the classroom. Student stress can be induced by teachers who are themselves under stress (Humphrey & Humphrey, 1985).

Teacher paper work, additional responsibilities, and student/teacher ratio are only a few of the factors which may induce stress in teachers that may, in turn, create a stressful environment for children. Finiman (1988) characterizes other behaviors by teachers as stress-producing for children. These include teacher power over students, becoming the class pet and difficulty conversing and communicating with the teacher. Helms (1985), in a similar study involving 1,111 students in New England, identified and supported teacher interactions as a source of stress for students which had emotional, physiological, and behavioral manifestations.

Understanding the role that adults play in creating a stressful environment for children is valuable information for teachers. As evaluators and dispensers of rewards and punishment, teachers and other adults will inevitably contribute to stress in children. Therefore, care should be taken to make the classroom environment as devoid of stress as possible.

The Learning Disabled Child

A learning disability is an internal factor that may cause stress to a child, as it is central to the life experience of the child and he/she lives it first hand (McNamee, 1982). In addition, external factors in
the school environment (e.g., labeling and pullout) may be devastating as they expose the child to the "stacking" effect of life stressors.

There have been many definitions offered for the term "learning disability." A definition generally agreed upon by educators and researchers working with this population of students defines learning disabilities as a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Learning disabilities may occur concomitantly with other handicapping condition or with extrinsic influences such as cultural differences, but are not the result of those conditions or influences (Hammill, 1990).

Early pioneers recognized the needs of a special group of children with learning problems who did not fit into traditional categories. Orton (1937) and his colleagues were concerned with dyslexia and related language disorders. Strauss and Kephart (1955) were concerned with a population of "brain injured" children demonstrating perceptual, behavioral and learning problems. At that same time, Benton (1959) and others worked with children who were classified as aphasic. Because of the increasing numbers of children falling into these groups in the 1960s, a search to find an all-inclusive term that would highlight the
normalcy of these children (intelligence, hearing, etc.) was sought. In 1963, a group of parents and professionals agreed upon the term "learning disability" and began the Association for Children with Learning Disabilities (Kirk, 1963, as stated in Duane and Leong, 1985).

Since the acceptance of the term "learning disability" for this unique group of students, the number of children identified and served by the public school system has increased at an alarming rate (Reschly, 1986). Consequently, this segment of the special population may presently be receiving a considerable portion of the resources allocated to serve children with special needs in the public school system.

Currently, definitional issues remain in the field of learning disabilities (Baum, 1988). However, there are characteristics peculiar to this group of students that may make the LD population more susceptible to stress and anxiety in the academic environment.

**Cognitive characteristics**

One major area of investigation for those in the field of learning disabilities is that of the cognitive functioning of the learning disabled child. Riley (1989) conducted a study using fourth and fifth grade LD and NLD students. Results of her study revealed a significant difference in cognitive ability between students with learning disabilities and nondisabled students. Further, she demonstrated that reading and math achievement yielded a significant positive correlation to cognitive ability. The connection of cognitive functioning to academic functioning, especially reading and math abilities, has also
been supported by other researchers investigating this area (Murray, 1978).

Torgesen (1988), focusing on a subgroup of the LD population, found that approximately 15% to 20% of school identified LD children had deficits in memory performance. These deficits were a result of inefficiency in coding, or representing the phonological features of language which limit the acquisition of fluent word identification or word analysis skills.

General problem-solving is another cognitive area researchers identify as difficult for the LD child (McLeskey, 1980). Often LD students have difficulty assessing components of a challenging situation or event and effectively identifying solutions to solve or overcome the difficulty.

Studies of stress reactions indicate that cognitive readiness increases an individual's ability to deal with problems. It enables a child to anticipate stressors, examine problems rationally, and use creative strategies to resolve problems. If the learning disabled child is deficient in his cognitive abilities he may not only experience the anxieties that accompany academic performance, he may also be hampered as his ability to creatively problem solve in stressful situations will be restricted.

Self-concept

For many reasons, it might be expected that children classified as LD would have negative global and school-related self-concepts. Many of
these children, at some point in their school endeavors, have experienced academic failure and negative competence feedback. More than likely, these experiences have been internalized and represented in a more negative view of self (Sabatino, 1982).

Grolnick and Ryan (1990) in a study of LD students found that LD students perceived themselves as significantly less competent in the cognitive domain than their matched-IQ counterparts. They also perceived that the control of powerful others was significant and that they had no power or control over academic outcomes. This may leave the LD child feeling inadequate in the academic environment and inferior to his "normal" peers.

Labeling of students with learning disabilities may also contribute to a low self-concept (Stainback & Stainback, 1984; Lilly, 1982; Rosenthal & Jacobs, 1968; Sontag, 1982). The mere fact of being labeled may negatively affect self-concept directly and indirectly through the mechanism of self-fulfilling prophecy (Good, 1982). In addition to the LD label, many of these students are also identified as slow or lazy when in reality they are neither. These labels have an adverse effect on future learning, self-perception, and on feelings of self-worth (Humphrey, 1988). It is obvious that any of these conditions would be stressful for the LD child.

Pullout programs are another source of stress for the LD child, as researchers have shown this to be an event which affects the student's social standing among peers. Madge, Affleck and Lowenbraun (1990), in a study of the social effects of integrated classrooms and resource
room/regular class placements, found that by the end of the second year of placement, special education students in the pullout programs had a lower social position when chosen by their regular peers. The decline of social status and acceptance of a student, by peers, as mentioned earlier, will obviously affect feelings of self-worth, thus adding to the existing anxiety being experienced.

**Behavior**

Researchers have indicated that in comparison to nonhandicapped children, learning disabled children demonstrate disproportionate degrees of inappropriate behavior in the classroom (Bender, 1986; McKinney & Feagans, 1983). In addition, this behavior is often incompatible with learning in the mainstream environment (Bender, 1986; McKinney & Feagans, 1983; Thurlow, Graden, Greener, & Ysseldyke, 1983).

Numerous studies utilizing teacher ratings and questionnaires have identified distractibility, acting out, disturbed peer behaviors, and off-task behavior as characteristic of some LD children (Walker, 1973; Keog, Pullis & Cadwell, 1982). Bender and Smith (1990), in a Meta Analysis of literature on the behavior of LD students, concluded that both methodologically strong and weak studies demonstrated significant deficits for LD children in the areas of on-task behavior, off-task behavior, conduct disorder, distractibility, and shy/withdrawn behavior as compared to their nondisabled peers. In several areas, significance reached one standard deviation, suggesting that the behavior of LD students was not only significantly different from non-LD peers, but
would possibly have an educationally significant effect on the student's ability to master learning task in the classroom.

Cardell and Parmar (1988) conducted a study on teacher perceptions of temperament characteristics of learning disabled children. Temperament was defined as the style of expression of behavior of the student. The six dimensions of temperament measured were activity, adaptability, approach/withdrawal, intensity, distractibility, and persistence. Responses of teachers of LD students were compared to responses of teachers of non-LD students utilizing the Temperament Assessment Battery.

Results indicated that there were overall group differences between the responses of the two groups. Teachers of LD students consistently evidenced perceptions in the negative direction as compared to the teachers of the non-LD. Specifically, LD students were found to be significantly different in their adaptability, persistence, and approach/withdrawal.

Finally, the adaptive behavior of children with learning disabilities was investigated in a study by Leigh (1987). Adaptive behavior includes the aspect of independent functioning, addresses the ability to meet sociocultural expectations for personal responsibility, and is described as age and/or culture specific (Leigh, 1987).

Leigh compared the adaptive behavior of 114 learning disabled subjects with that of a large nationally representative normative sample of children with normal intelligence and those with mental retardation. The Adaptive Behavior inventory was employed to evaluate the functional,
daily living skills of the LD subjects. These included Self-Care Skills, Communication Skills, Social Skills, Academic Skills and Occupational Skills.

Learning disabled students were found to be functioning below the nondisabled group in adaptive behavior skills but higher than the mentally retarded group. More significant, however, was the differences between elementary and secondary groups. Performance declined from average to below average between the elementary ID group and the secondary LD group. The most sizeable difference in performance was on the Communication Skills scale. Secondary students were significantly lower (2.1 points with 2.2 being one standard deviation) than the comparable scores for the comparable scores for the elementary-age group. This is of particular importance as adequate communication skills are essential in contemporary society. Thus, the inability to convey thoughts to others may be a cause for stress to a child.

**Social competence**

The social competence of a child in school plays a major role in his ability to function effectively in this environment. Interacting in and out of the classroom environment can, therefore, become a very stress-provoking situation for students lacking competence in this area.

LD children have been identified as having more problems obtaining peer acceptance, have been identified as being unassertive with peers in certain social situations, and more often have been known to adopt group values rather than make their own decisions (White, 1985; Bryan, Donahue
Byron, Pearl and Fallon (1989), in a replication study of LD students conformity to peer pressure, found that students with LD demonstrated more willingness than their classmates to conform to peer pressure and engage in antisocial behavior. Forty-three seventh and eighth graders, 21 of whom were LD, were administered a questionnaire which consisted of 20 hypothetical conformity dilemmas. These included antisocial behaviors such as cheating and prosocial behaviors such as collecting money for a charity. Although there were no differences between LD and non-LD on prosocial behaviors, LD students indicated a greater willingness to conform to antisocial dilemmas.

A study was also conducted by Stone and Greca (1990) regarding the social status of children with learning disabilities. Unlike previous studies, these authors explored the nature of peer social status problems experienced by LD students. The sample consisted of 547 fifth and sixth graders including 57 mainstreamed LD students. A rating scale and peer nomination measures were used to indicate social status of each student.

Results were consistent with previous research in that LD children received lower play rating, lower liking scores, and higher disliking scores than NLD peers. Of more significance, however, was the nature of the lower score obtained by LD children. LD children were over-represented in the rejected and neglected groups (75%) and under-represented in the popular and average groups (14%).

Results of the aforementioned studies provide further confirmation of the problematic social competence found among LD students. This may suggest why students who are generally less accepted or rejected by peers
tend to exhibit more conformity to peer pressure for inclusion. Peer acceptance is of paramount importance during school years. Therefore, neglect and rejection by peers is obviously a means for increasing anxiety in a child’s life.

An individual’s affective orientation toward self, others, and various life contexts is a major influence on how stress is handled. Although there is a normal range of stress in any school or classroom, the social and behavioral characteristics coupled with the cognitive disabilities of many LD children, may make the school environment an extremely stressful place.

Children’s Coping Responses

Stress-resistant people have a history of coping with childhood stress. Rather than being sheltered from stress, the children’s support network (parents, teachers, other significant adults) had encouraged them in new endeavors and instilled in them a sense of self-confidence and an expectation of success if they worked long and hard enough (Kuczen, 1987).

In general, children who have a positive self-image and receive support from home, school, and other significant adults are better equipped for handling the typical stresses often found in childhood. These children rely on the fact that when situations get tough, there is someone there on whom to depend for guidance. Moreover, when they are successful in their attempts to cope with stressful situations, there is often reinforcement from a significant adult. As a result, these
children become more and more confident in coping with stressful situations as they grow (Kuczen, 1984).

McNamee (1982) suggests that children fall within one of three categories of coping responses, Levels I (good copers), II (adequate copers), and III (unsuccessful copers). They are categorized as good copers, adequate copers, and exceptionally poor copers. Good copers are those who adjust to stressful situations utilizing effective coping skills and integrate stressful experiences into their lives in a positive way. These children, who deal effectively with stress, have five key qualities according to Elkind (1981). They are social competence, problem-solving skills, self-confidence, independence, and achievement orientation. These children attract and use the support of adults at home and school. They have a future orientation with realistic goals. The successful copers are sensitive, empathetic, and insightful about their environment and other people. Moreover, they are inner directed and think autonomously (Blom, Cheney, & Snoddy, 1986).

Adequate copers are found at the second level. These children are survivors. They adequately cope with stress with some effort and adapt to the stressful situation. However, level II copers may not be able to positively integrate the experience and may learn little that can be employed in similar future situations. This child may not have the flexibility and inventive creativity of response options, and may not be oriented to future implications of situations (Haan, 1982).

The level III copers do not have the ability to adapt to a stressful situation. They are unable to develop successful coping mechanisms and
approach each stressful situation in a disorganized and confused manner. This type of coper may be noncommunicative, uncooperative, defensive and easily angered. They may have a generally negative attitude and feel as they though cannot control the events that occur in their lives (Reed, 1984).

Coping includes instinctive or reflexive reactions to threats as an array of learned responses to aversive stimuli (Compas, 1987). For children, coping with stress successfully should be an integral aspect of the continual process of growth and learning.

Summary

The present chapter reviewed literature in the area of stress and coping behaviors in children. There was also a review of characteristics found in LD children that may make them more prone to anxiety. The following chapter will discuss the methodological procedures utilized in this study.
CHAPTER III. METHODOLOGY

Introduction

The purpose of this study was to investigate the stress levels and coping responses of learning disabled and regular education students and their relationship to: (1) students' academic placement; (2) gender; and (3) educational elementary/secondary level. This chapter describes the research procedures involved in the study: (a) the research design; (b) the subject selection; (c) instrumentation; (d) data collection, recording, and analysis of data.

Research Design

This study utilized a descriptive comparative research design. The study was exploratory in nature because of the newness of information in this field. Also, self-report questionnaires were used to obtain data.

Three types of analysis procedures were utilized: Correlational statistical design, the t-test for difference in means, and analysis of variance (ANOVA) for difference in means. A correlation is a descriptive statistic which describes the relationship between two variables. This relationship can be expressed quantitatively by an index called a coefficient of correlation. This coefficient assumes a value from zero to positive or negative one. Positive one is a perfect positive correlation, while negative one is a perfect negative correlation.
Inferential statistics are used to make reasonable decisions from a sample to a population. The t-test is a type of inferential statistic that can be used when comparing two groups. In the present study, the t-test was used for comparison of the regular education population to the sample of LD students.

The One-Way Analysis of Variance is another type of inferential statistic that can be used when comparing groups. This statistical analysis is commonly used when one is attempting to analyze the means of two or more samples. The general rationale of ANOVA is that the total variance of all the data in an experiment can be separated and attributed to two sources: variance within groups and variance between groups. The ANOVA was utilized in this study to compare stressful situations identified by students.

Level of significance was set at .05 for this study. However, since this is an exploratory study, null hypotheses significant at the .10 level were also mentioned in the results. Sometimes this is done with exploratory studies as the information is new and it is important to preserve those findings that may have potential.

Variables of the Study

Variables investigated in this study included student anxiety level and coping responses. Anxiety was measured by the Children’s School Questionnaire. Coping responses were identified using the Coping Responses Inventory - Youth Form.
Statement of Research Hypotheses

The following research hypotheses were made:

1. There is a significant difference between learning disabled and regular education students in the level of anxiety experienced in the academic environment.

2. There is a significant difference between coping responses employed by learning disabled and regular education students.

3. There is a significant relationship between coping responses of students experiencing high anxiety levels and those experiencing low anxiety levels.

4. There is a significant difference between anxiety levels of elementary and secondary LD students.

5. There is a significant difference between coping responses of elementary and secondary LD students.

6. There is a significant difference between coping responses of male and female LD students.

7. There is a significant difference between the school anxiety level of male and female LD students.

Subject Selection

The population for this study was taken from a school district in central Iowa. Approval to conduct the research was secured from the Marshalltown School District, Marshalltown, Iowa, and the Iowa State University Human Subjects Review Committee. Upper elementary and junior high school students were chosen for this study. Upper elementary
students were chosen because coursework becomes more demanding at this level compared to early elementary grades. Junior high students were also chosen. For this population, not only does coursework become more strenuous at the junior high level, peer acceptance and social interaction also begin to take primary importance in the lives of adolescents at this time.

All fourth and fifty grade students and learning disabled students who attended the elementary school were included in the study. A randomly selected sixth, seventh, and eighth grade class and all learning disabled students were included from the junior high school setting. Two hundred permission forms were sent to parents via students, 150 to parents of students in regular education, and 50 to parents of learning disabled students.

Instrumentation

The study required two instruments: (1) an instrument to measure the anxiety level of students; and (2) an instrument to measure the coping response employed by students.

The Children’s School Questionnaire

The Children’s School Questionnaire was developed by Phillip S. Beeman (Beeman, 1966). This instrument was developed to provide a measure of school anxiety and self-disclosure coping styles. Subtests include rejection by others, taking tests, meeting expectations of others and stress reactivity. According to Phillips (1972), anxiety is manifested physiologically, phenomenologically, and behaviorally and is
elicited by stress or threatened deprivation of an anticipated satisfaction. Several studies have been conducted in the development of this instrument, and subsequent research has supported its validity in measuring school anxiety in children (Phillips, 1967; 1968a; 1968b; 1971). In addition to items present on this scale, five additional items were added. These items were directed toward situations that are peculiar to the learning disabled child. After a review of literature, researchers indicate that LD children may experience more academic problems, behavior problems, self-concept problems, and social competence problems (Grolnick & Ryan, 1990; Good, 1982; Reynolds & Wang, 1983; Stone & Greca, 1990). Reliability coefficient for this instrument was calculated at .82.

The additional items developed were added to determine if these situations are anxiety producing for the LD student and were answered by both populations for comparison purposes.

The Coping Responses Inventory - Youth Form

The Coping Responses Inventory - Youth Form was developed by R. H. Moos (Moos, 1989). This instrument was developed to identify youth coping responses to stressful life circumstances. The CRI - Youth Form combines two conceptual approaches in identifying coping responses: focus and method. The first emphasizes the orientation of coping which is problem-focused or emotion-focused. The latter emphasizes the method of coping which is identified as cognitive or behavioral. The instrument has been field-tested twice. In the first testing, 315 youth
participated. In the second administration of the instrument, 254 of the initial sample were given the inventory again. The sample included healthy youth, depressed youth, youth with conduct disorders, and youth with rheumatic disease. Several studies have been conducted using the CRI - Youth Form. Ebata and Moos (1989) concluded that depressed youth didn’t differ from other groups in approach coping styles but relied more heavily on avoidance coping responses. Youth with conduct disorders relied on three of the four avoidance coping strategies (cognitive avoidance, resigned acceptance, and emotional discharge) more than healthy youth. Youth with rheumatic disease were comparable to healthy youth on both approach and avoidance coping, but were less likely to employ avoidance strategies than the depressed youth of those with conduct disorder. Moos and Swindle (in press) and Schafer and Moos (in press), using their model of stress and coping processes, found that older youth tended to rely more heavily on both approach and avoidance coping responses. In addition, girls were more likely to employ logical analysis than boys in dealing with stress, sought support and expressed their feelings more openly. Reliability for this instrument was calculated at .92.

Data Collection, Recording, and Statistical Analysis

Data collection

A total of 140 students participated in the study. There were 54 students from the elementary school. Forty-six were regular education, and eight were LD. A total of 86 students participated from
the junior high school. Sixty-two were regular education, and 24 were LD.

The junior high school LD and regular education students participating in this study were administered the questionnaires simultaneously in the school auditorium. This group of students included 86 of the original 120 sixth, seventh, and eighth grade LD and regular education students. One child in this group asked to be excused from the testing situation and was allowed to do so, as it was stated initially that this was totally voluntary.

Elementary level students were tested within their individual classroom environments. The fourth, fifth and LD students were each given the questionnaire at different times during the day. All students except for elementary LD answered questionnaires using the electronic bubble sheets. To insure accuracy, elementary LD students were allowed to answer directly onto questionnaires. Information was later transferred to electronic scoring sheets by test administrator and was verified by research assistant.

Recording

The following information was completed and retained for analysis:
1. Student placement: a = regular education; b = special education
2. Sex of student: 1 = main, 2 = female
3. Grade level of student: 4 = fourth, 5 = fifth, 6 = sixth, 7 = seventh, 8 = eighth
4. Anxiety level: range 0-48 yes/no answers
5. Sources of anxiety: 1 = rejection by others with yes/no answers; 2 =
taking tests with yes/no answers; 3 = meeting expectations of others
with yes/no answers; 4 = stress reactivity

6. Problem/situation: 1 = physical health, 2 = home/money, 3 = parent-
related, 4 = sibling-related, 5 = extended family, 6 = school-
related, 7 = friend-related, 8 = boy/girlfriend

7. Coping responses: 1 = logical analysis, 2 = positive reappraisal,
3 = seek guidance and support, 4 = take problem-solving action, 5 =
cognitive avoidance, 6 = acceptance/resignation, 7 = seek alternative
rewards, 8 = emotional discharge

Student placement, sex of student, grade level (elementary 4th-5th,
secondary 6th-8th), anxiety level and coping responses were used for
testing hypotheses 1 through 7. Sources of anxiety, coping styles and
problem situations were used for additional analysis.

Two main reasons for dividing the analysis into two major sections
of hypothesis testing and additional data analysis were the very small
sample sizes for selected categories and the relative newness of some of
the variables. The body of knowledge for these variables, therefore,
does not have a theoretical basis.

Analysis of data

The data were analyzed using the Statistical Package for the Social
Sciences (SPSS-X) (Norusis, 1988). Initially, descriptive statistics,
including frequency counts, percentages, means and variance measures for
each response item on the questionnaires, were calculated.
The purpose of the study was to compare anxiety levels and coping responses for regular education and LD children in the fourth through eighth grades. One objective of the study was to determine how anxiety and coping responses related. A correlation was the statistical tool used to determine this. One-way analysis of variance (ANOVA) and t-test were used to test the null hypotheses in the study at the .05 level of significance.

Summary

The purpose of this chapter was to describe the methodology used in the process of conducting this study. Subject selection, student characteristics and instrumentation were described. Results are compiled and displayed in appropriate tables in Chapter IV of the study. The focus of Chapter IV is statistical analyses and interpretation of the data.
CHAPTER IV. RESULTS

The purpose of this study was to compare stress and coping styles of regular education and learning disabled students in the fourth through eighth grades.

Analysis of the Null Hypotheses

This section reports results in reference to the research hypotheses stated in Chapter III. The research hypotheses are restated in the null form for completing hypotheses. A probability level of 0.05 was established as the criterion for rejection of the null hypotheses. To statistically analyze hypotheses one through six, t-tests were utilized to compare group means. Also, the decision was made when using the t-test to examine hypotheses for difference between total group means of LD and regular education students, two approaches would be utilized: (a) both groups as samples, and (b) regular education as population and LD group as sample. Therefore, there will be two analysis results reported for LD and regular education group comparisons. Finally, only complete data were utilized in the analyses. Thus, individual group numbers may vary slightly.

Anxiety

As stated previously, one of the main foci of the present study was to investigate differences between LD and regular education students and differences among LD students with regard to the amount of anxiety
experienced in the academic environment. Hypotheses one through three addressed this area, and are as follows:

1. There is no difference between learning disabled and regular education students in the level of anxiety experienced in the academic environment.

2. There is no difference between the anxiety levels experienced by elementary and secondary LD students in the academic environment.

3. There is no difference between the anxiety levels experienced by male and female LD students in the academic environment.

Additional analyses were also conducted in the area of anxiety to determine what, if any, factors could be contributed to the anxiety experienced by students. The Children's School Questionnaire identified four possible causes for this anxiety: rejection by others, taking tests, meeting expectations of others and stress reactivity. Comparisons between LD students and between LD and regular education students were also carried out on these categories.

The three aforementioned hypotheses were tested using scores obtained from the Children's School Questionnaire. To determine whether or not significant differences existed between the specified groups, t-tests were performed using anxiety level scores ranging from 1 to 43 on a continuous scale.

The results from the analysis of anxiety level between LD and regular education students, indicated that there was a difference between anxiety levels of these two groups; however, this level did not reach
significance. Mean anxiety levels for the two groups differed, with LD students showing a higher mean anxiety score. Also, with regard to causes of anxiety, LD and regular students were similar in all areas except for meeting expectations of others and stress reactivity. There was a significant difference between stress reactivity of LD and regular education students \((t = -2.55, p < .05)\).

Additional analysis using the regular education group as the population and LD as the sample from that population supported initial results. There were no significant differences between the two groups on the anxiety factor but significant differences with regard to stress reactivity among the two groups \((t = 3.04, p < .05)\) (see Table 1), thus indicating that this group of LD students may have less tolerance for stressful situations.

Results for the second analysis, differences between elementary and secondary LD students, indicated that as a whole secondary students

### Table 1. Mean levels for anxiety and major sources of anxiety for regular education and LD groups

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg ed</td>
<td>107</td>
<td>25.14</td>
<td>7.042</td>
<td>-1.12</td>
<td>0.266</td>
</tr>
<tr>
<td>LD</td>
<td>30</td>
<td>26.77</td>
<td>7.089</td>
<td>1.27^a</td>
<td></td>
</tr>
<tr>
<td><strong>Stress reactivity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>107</td>
<td>1.11</td>
<td>1.26</td>
<td>-2.55^a</td>
<td>0.012^*</td>
</tr>
<tr>
<td>LD</td>
<td>31</td>
<td>1.81</td>
<td>1.56</td>
<td>3.04^a</td>
<td></td>
</tr>
</tbody>
</table>

^aRegular education as population.

^*p < .05.
exhibited more stress except in the area of stress reactivity where elementary students scored slightly higher. However, none of these scores reached the significance level.

Further investigation comparing secondary LD and secondary regular education students resulted in significance on measures of anxiety (Table 2). LD secondary students demonstrated significantly more anxiety than regular high school students ($t = -2.34$, $p < .05$). Moreover, on causes of stress among secondary students, LD students had significantly higher anxiety levels when fulfilling the expectations of others ($t = -3.35$, $p < .05$) and stress reactivity ($t = -2.22$, $p < .05$) (Table 2).

When comparing male and female LD students in the third analysis, a

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>$t$-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
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<td>23.5</td>
<td>6.905</td>
<td>-2.34</td>
<td>0.022*</td>
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<tr>
<td>LD</td>
<td>23</td>
<td>27.5</td>
<td>7.044</td>
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<td></td>
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<tr>
<td><strong>Expectation</strong></td>
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</tr>
<tr>
<td>Reg ed</td>
<td>61</td>
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<td>1.349</td>
<td>-3.35</td>
<td>0.001*</td>
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<td>24</td>
<td>2.70</td>
<td>1.853</td>
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<td></td>
</tr>
<tr>
<td><strong>Stress reactivity</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>60</td>
<td>1.00</td>
<td>1.275</td>
<td>-2.22</td>
<td>0.029*</td>
</tr>
<tr>
<td>LD</td>
<td>23</td>
<td>1.70</td>
<td>1.490</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*$p < .05$. 

Table 2. Mean levels for anxiety and major sources of anxiety for secondary LD and secondary regular education students
significant difference was found between the two groups. Female LD students differed significantly on measures of anxiety (t = -5.60, p < .001) and on all school anxiety factors: rejection by others (t = -2.65, p < .05); taking tests (t = -3.74, p < .01); expectations of others (t = -2.18, p < .05); stress reactivity (t = -2.37, p < .05) (Table 3).

Although not a part of the hypothesis, when comparing LD and regular education groups combined for difference in sex on levels of anxiety, this finding was consistent.

Table 3. Mean level of anxiety and major sources of anxiety of male and female LD students

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>23.53</td>
<td>5.232</td>
<td>-5.60</td>
<td>0.000*</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>34.00</td>
<td>3.742</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>2.63</td>
<td>1.479</td>
<td>-2.65</td>
<td>0.013*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>4.10</td>
<td>1.375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>2.74</td>
<td>1.939</td>
<td>-3.74</td>
<td>0.001*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>5.20</td>
<td>1.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expectation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>2.10</td>
<td>1.638</td>
<td>-2.18</td>
<td>0.038*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>3.50</td>
<td>1.864</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress reactivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>1.40</td>
<td>1.387</td>
<td>-2.37</td>
<td>0.025*</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>2.70</td>
<td>1.636</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
Coping responses

The second focus of this study dealt with the coping responses employed by regular and LD students. Comparisons were conducted between regular education and LD students and among LD students. Hypotheses four through six are as follows:

4. There is no difference between coping responses employed by regular and LD students.

5. There is no difference between coping responses employed by elementary and secondary LD students.

6. There is no difference between coping responses employed by male and female LD students.

These hypotheses were tested using scores obtained from the Coping Responses Inventory - Youth Form. Data were analyzed in two ways. Groups were initially compared utilizing general coping response style categories designated in the instrument as "approach/avoidance." In addition, each response category is comprised of four response styles.

The "approach" response category consists of logical analysis, positive reappraisal, seeking guidance and support and takes problem-solving action. The "avoidance" category consists of cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge. Additional analyses were conducted utilizing these individual response styles.

Results of the fourth analysis, the difference between coping styles of regular and LD students, indicate that when coping with stressful situations, LD and regular students as a group utilized approach and
avoidance coping styles similarly, with LD employing both more than regular education students. However, when analyzing individual coping scales, LD and regular students differed significantly in their use of positive reappraisal as a coping mechanism in stressful situations ($t = -2.19, p < .05$) with LD students employing this strategy more than regular education students (Table 4).

The fifth analysis compared elementary and secondary students on their coping response styles. In general, LD high school students approached stress more often than elementary LD students. In the use of positive reappraisal, high school LD students utilized this approach significantly more than elementary LD students ($t = -2.45, p < .05$) (Table 5). High school LD students also attempted to seek guidance from teacher and parents more than elementary LD students when approaching stressful situations; however, this was not significant.

In addition, high school LD students employed approach strategies significantly more than regular education high school students

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t- value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive reappraisal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>104</td>
<td>6.71</td>
<td>4.071</td>
<td>-2.19</td>
<td>0.030*</td>
</tr>
<tr>
<td>LD</td>
<td>32</td>
<td>8.63</td>
<td>5.034</td>
<td>2.67^a</td>
<td>0.003</td>
</tr>
</tbody>
</table>

^Using regular education as population.
*p < .05.
Table 5. Mean level of elementary and secondary LD students on positive reappraisal coping strategy

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive reappraisal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>8</td>
<td>5.13</td>
<td>5.489</td>
<td>-2.45</td>
<td>0.020*</td>
</tr>
<tr>
<td>Secondary</td>
<td>24</td>
<td>9.80</td>
<td>4.393</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

(t = -2.33, p < .05) with positive reappraisal being utilized significantly more often by the LD secondary group (t = -3.38, p < .05) (Table 6). Avoidance strategies were also utilized more by secondary LD students but not to a level of significance.

Table 6. Mean level of secondary LD and secondary regular education on approach and positive reappraisal coping strategy

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>58</td>
<td>25.43</td>
<td>11.556</td>
<td>-2.33</td>
<td>0.022*</td>
</tr>
<tr>
<td>LD</td>
<td>23</td>
<td>32.90</td>
<td>16.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive reappraisal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>60</td>
<td>6.60</td>
<td>3.702</td>
<td>-3.38</td>
<td>0.001*</td>
</tr>
<tr>
<td>LD</td>
<td>24</td>
<td>9.80</td>
<td>4.393</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
Finally, elementary LD and regular students differed in their use of coping styles in stressful situations. Regular education students generally utilized approach and avoidance strategies more often than LD elementary students. Regular elementary education students employed logical analysis ($t = 2.02, p < .05$) and exhibited emotional discharge ($t = 2.05, p < .05$) significantly more often than elementary LD students (Table 7).

On the sixth analysis, which compared male and female LD students on coping strategies, female LD students were dominant in the area of approach coping strategies on each of the subscales: logical analysis ($t = -3.44, p < .05$); positive reappraisal ($t = -2.63, p < .05$); seeking guidance ($t = -4.37, p < .001$); and taking action ($t = -2.42, p < .05$) (Table 8); and two of the avoidance subscales: cognitive avoidance ($t = -3.32, p < .05$), and emotional discharge ($t = -2.36, p < .05$) (Table 9).

Table 7. Mean level of elementary LD and elementary regular education students on coping strategies

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>46</td>
<td>8.40</td>
<td>4.079</td>
<td>2.02</td>
<td>0.048*</td>
</tr>
<tr>
<td>LD</td>
<td>8</td>
<td>5.20</td>
<td>3.694</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg ed</td>
<td>46</td>
<td>6.80</td>
<td>3.968</td>
<td>2.05</td>
<td>0.046*</td>
</tr>
<tr>
<td>LD</td>
<td>8</td>
<td>3.80</td>
<td>2.915</td>
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<td></td>
</tr>
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</table>

*p < .05.
### Table 8. Mean level of male and female LD on approach coping strategies

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>6.11</td>
<td>3.604</td>
<td>-3.44</td>
<td>0.002*</td>
</tr>
<tr>
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<td>11</td>
<td>11.23</td>
<td>4.541</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive reappraisal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>7.30</td>
<td>4.506</td>
<td>-2.63</td>
<td>0.014*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>11.73</td>
<td>4.606</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking guidance</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>3.70</td>
<td>3.085</td>
<td>-4.37</td>
<td>0.000*</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>10.10</td>
<td>5.087</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking action</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>5.60</td>
<td>4.199</td>
<td>-2.42</td>
<td>0.022*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>9.40</td>
<td>4.202</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

### Table 9. Mean level of LD male and female students on avoidance coping strategies

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>5.80</td>
<td>3.622</td>
<td>-3.32</td>
<td>0.003*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>11.00</td>
<td>4.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>4.90</td>
<td>3.538</td>
<td>-2.36</td>
<td>0.025*</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>8.60</td>
<td>5.278</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
Relationship between anxiety and avoidance/approach coping styles

Hypothesis seven, there is no relationship between avoidance/approach coping styles and student’s anxiety level, was analyzed to determine if students employed a particular type of coping style more often, depending on their level of anxiety. A Pearson correlation was conducted to examine the relationship. Results indicated that the association between anxiety and the use of approach (.3325) or avoidance (.3027) coping styles for this group of students was not a strong one; however, it was significant. Further analysis was necessary to provide additional information with regard to the use of coping responses in anxious situations. Two one-way ANOVAs were then conducted utilizing three levels of anxiety (low, moderate and high) and the two coping styles (avoidance and approach).

Results of one-way analysis of variance reveal that there was a significant difference between means of both approach and avoidance coping styles when compared with anxiety levels (Table 11). With regard to avoidance coping strategies, there was a significant difference between students experiencing low and high anxiety as the more anxious the student, the more avoidance strategies were used. For approach strategies, students experiencing high anxiety employed these strategies significantly more often than those experiencing low anxiety (Table 11).

Because data were available, additional analyses were conducted separating LD groups from regular education students on both approach and avoidance coping styles. While significant differences remained for
regular education students between anxiety level and the amount of coping strategies employed, this was not the case for LD students. LD students employed avoidance coping strategies more consistently over situations of low, moderate and high anxiety. While approach strategies were utilized more in moderate to high anxiety situations, however, no level was significantly different.

**Additional analysis**

Five additional items which were prepared by the researcher were included on the Children's School Questionnaire. These items pertained directly to LD students and were developed from a review of literature on aspects peculiar to LD students such as labeling, pullout programs, etc.

**Table 11. Measure of anxiety level by avoidance/approach coping styles**

<table>
<thead>
<tr>
<th>Anxiety level</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>F</th>
<th>Significant difference&lt;sup&gt;a&lt;/sup&gt; p&lt;.05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>46</td>
<td>22.80</td>
<td>10.00</td>
<td>5.15  Between 1 and 3</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>46</td>
<td>28.82</td>
<td>13.10</td>
<td>(.007*)</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>38</td>
<td>30.61</td>
<td>12.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>44</td>
<td>21.84</td>
<td>11.50</td>
<td>7.05  Between 1 and 3</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>45</td>
<td>27.42</td>
<td>13.74</td>
<td>(.001*)</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>38</td>
<td>32.70</td>
<td>13.94</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>1 = low anxiety, 2 = moderate anxiety, and 3 = high anxiety.

<sup>*p < .05.</sup>
Results indicate that there were significant differences regarding how LD and regular education students responded to these questions for each comparison with the exception of LD elementary and LD secondary students and elementary regular education and learning disabled students (Table 12).

**Problem situations and coping styles**

A final analysis was conducted utilizing additional information obtained from the Coping Responses Inventory - Youth Form. Each participant was asked to give a problem situation that recently caused stress. The respondent was then instructed to answer coping response questions in relation to that situation. A one-way analysis of variance

### Table 12. Mean level of additional Children’s School Questionnaire anxiety items

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg ed</td>
<td>106</td>
<td>0.92</td>
<td>1.18</td>
<td>-2.10</td>
<td>0.037*</td>
</tr>
<tr>
<td>LD ed</td>
<td>31</td>
<td>1.50</td>
<td>1.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD boys</td>
<td>20</td>
<td>1.10</td>
<td>1.37</td>
<td>-2.12</td>
<td>0.043*</td>
</tr>
<tr>
<td>LD females</td>
<td>10</td>
<td>2.40</td>
<td>1.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary LD</td>
<td>8</td>
<td>0.88</td>
<td>1.13</td>
<td>-1.21</td>
<td>0.238</td>
</tr>
<tr>
<td>Secondary LD</td>
<td>23</td>
<td>1.70</td>
<td>1.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary reg</td>
<td>47</td>
<td>1.09</td>
<td>1.20</td>
<td>0.46</td>
<td>0.645</td>
</tr>
<tr>
<td>Elementary LD</td>
<td>8</td>
<td>0.88</td>
<td>1.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary reg</td>
<td>59</td>
<td>0.80</td>
<td>1.16</td>
<td>-2.69</td>
<td>0.009*</td>
</tr>
<tr>
<td>Secondary LD</td>
<td>23</td>
<td>1.70</td>
<td>1.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
was conducted on this information to determine if there was a significant
difference between any problem situation group and coping response
subscale.

Of the eight coping response categories, a combination of five were
utilized in the analysis. Problem situation category one was omitted
because of the small number of situations falling into that category (4).
Four of the remaining categories were combined into two (home/sibling and
friend/relationship) to result in the five categories used in the
analysis.

Of the eight coping responses subscales, two included group means
that significantly differed from one another. In the positive
reappraisal subscale group, five (extended family) differed significantly
from group mean three (parent-related) and six (school-related). In the
resigned acceptance subscale, group mean five (extended family) differed
significantly from group mean six (school-related) (Tables 13 and 14).

Summary

The present chapter presented an analysis of responses of
students to the Children’s School Questionnaire and the Coping Responses
Inventory - Youth Form. There were two main objectives in the study:
First, to compare anxiety levels of LD and regular education students;
and second, to compare coping styles of LD and regular education
students. A discussion of the results of these analyses is found in the
following chapter.
Table 13. Comparison of problem situation to approach coping subscales

<table>
<thead>
<tr>
<th>Problem situationᵃ</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>F (prob.)</th>
<th>Significant difference p&lt;.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>7.2</td>
<td>4.3</td>
<td></td>
<td>No two groups</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>9.2</td>
<td>4.2</td>
<td>1.36</td>
<td>were significantly different</td>
</tr>
<tr>
<td>5</td>
<td>26</td>
<td>8.6</td>
<td>4.6</td>
<td>(.252)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>22</td>
<td>7.0</td>
<td>3.7</td>
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</tr>
<tr>
<td>7</td>
<td>23</td>
<td>9.2</td>
<td>4.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive reappraisal</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>34</td>
<td>6.0</td>
<td>3.6</td>
<td></td>
<td>Between 5 and 6</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>8.0</td>
<td>4.5</td>
<td>4.37</td>
<td>Between 5 and 3</td>
</tr>
<tr>
<td>5</td>
<td>27</td>
<td>9.5</td>
<td>4.8</td>
<td>(.003*)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td>5.4</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22</td>
<td>8.6</td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking guidance</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>8.3</td>
<td>4.0</td>
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<td>No two groups</td>
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<tr>
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<td>10</td>
<td>8.2</td>
<td>5.2</td>
<td>1.21</td>
<td>were significantly different</td>
</tr>
<tr>
<td>5</td>
<td>27</td>
<td>5.7</td>
<td>4.5</td>
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ᵃ³ Parent related, 4 = home/sibling, 5 = extended family, 6 = school related, and 7 = friend/relationship.

*³p < .05.
Table 14. Comparison of problem situation to avoidance coping subscales

<table>
<thead>
<tr>
<th>Problem situation</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>F (prob.)</th>
<th>Significant difference</th>
<th>p&lt;.05</th>
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</thead>
<tbody>
<tr>
<td><strong>Cognitive avoidance</strong></td>
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<td><strong>Resigned acceptance</strong></td>
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<td><strong>Seeking alternative rewards</strong></td>
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<td><strong>Emotional discharge</strong></td>
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*a* = Parent related, 4 = home/sibling, 5 = extended family, 6 = school related, and 7 = friend/relationship.

*p* < .05.
CHAPTER V. DISCUSSION

The anxiety that children experience and the strategies they employ to deal with these anxieties have been concerns for educators, parents and others who understand the challenges of dealing with a child under stress. Numerous studies have examined what children identify as being stressful and the level of anxiety these stressful experiences cause in their very young lives (Yamamoto, 1987). What has been conspicuously absent from the literature, however, is research investigating the stress that is experienced by children who, in the school environment, are not considered "typical," such as those diagnosed as learning disabled. While several researchers have alluded to the fact that children beset with challenges above and beyond those ordinarily found in the academic environment, such as severe learning problems or physical handicaps, are more susceptible to school anxiety, little research has been conducted to determine the capacity these children possess to confront anxious situations.

The present study was conducted to compare stress levels and coping skills of regular education and learning disabled students. Two questionnaires were administered to each student: the Children's School Questionnaire and the Coping Response Inventory - Youth Form. Data were analyzed using the one-way analysis of variance, the t-test and correlational statistics. A summary of the findings and implications for further research will be discussed here.
Hypotheses I and IV

Group comparisons LD/regular education on anxiety and coping

When comparing regular education students and LD students as a group, there was a slight difference in means for anxiety level of the two groups, but this difference did not reach significance. When examining sources of stress for these two groups, however, findings suggested that LD students were significantly more susceptible to experiencing stress in the school environment. Meeting expectations of others was more stress-producing for LD students than regular students. Also, on measures of stress reactivity, LD students showed significantly higher levels, particularly physiological reactions, such as bad dreams, shaking knees, fear of fainting, and rapid heart beat, that were indicative of low tolerance to stress conditions.

There are several factors that may cause this low tolerance. In the academic environment, LD students have a number of challenges. Unlike other students with visible disabilities, a learning disability is often a hidden disability and may go unrecognized and untreated for a long period of time (McNamee, 1982). The LD child, however, is still feeling the frustration of being different and dealing with the struggle of attempting to compete with peers and meet the demands placed upon her/him by teachers and parents with inadequate resources.

What eventually transpires is the LD child perceives himself/herself as having little control over circumstances because of continual unsuccessful experiences. These experiences often reinforce negative
feeling of self and academic abilities. When occurring repeatedly, this situation may leave an LD child vulnerable to stressful situations.

Results of this study support previous suggestions that many LD students may be extremely vulnerable to stressful situations, therefore, leading them to view academic challenges as insurmountable, thus making them more prone to stress and causing physiological reactions such as those mentioned earlier (McNamee, 1982; Humphrey & Humphrey, 1985).

Secondary LD/regular education

Secondary LD students exhibited significantly more anxiety than secondary regular education students. This may be due to the fact that at the secondary level, academic requirements and social interaction become more important and may place greater demands upon students to "conform" and "perform."

The major causes for stress among LD students were meeting expectations of others and stress reactivity. These findings suggest that at the secondary level, differences in the ability of students to meet academic and/or social requirements may make them more vulnerable to stress. By entry into junior high school, many LD students have experienced firsthand the embarrassment and frustration that often accompany academic tasks. Thus, the secondary level LD child may be predisposed to anxiety.

Another element of life for secondary school students is the internal changes that are often taking place at this stage. As Humphrey and Humphrey (1985) have previously stated, one of children’s main
concerns is being similar in trait to their peers, especially at this level. These internal changes (puberty), coupled with increasing expectations for academic performance and self-knowledge by the individual of his inabilities, may be a possible reason for the difference in anxiety level and vulnerability to stress for the secondary LD child.

As a group, LD and regular education students in this study utilized approach and avoidance skills similarly. However, LD students tended to utilize positive reappraisal which entailed trying to look at the problem in a positive way while still accepting the importance of the situation significantly more than regular education students.

At the secondary level, LD students utilized approach strategies significantly more often than regular secondary students. Positive reappraisal was again utilized by secondary LD students significantly more often than regular education students. For other subscales in the approach avoidance categories, LD and regular secondary students were similar in their use of strategies in stressful situations.

Positive reappraisal, the cognitive attempt of restructuring a problem in a positive way while still accepting that it exists is an approach skill utilized by secondary LD students significantly more often than any other group analyzed. Cohen (1986) suggests that approach strategies of coping, such as positive reappraisal, are more effective, when anxiety must be dealt with for a long period of time and avoidance coping often more valuable during the initial period when emotional resources are limited. Therefore, this approach may be utilized more by
secondary LD students because they have experienced the anxiety of being disabled academically and the failure that often accompanies this situation for a longer period of time, thus giving them an opportunity to accept the situation while still dealing with the anxiety.

**Elementary LD/regular education students**

Whereas elementary LD and regular education students showed no significant difference on measures of anxiety, regular elementary students utilized approach and avoidance strategies more often than elementary LD students. Interestingly, regular students attempted to understand and prepare themselves mentally for stressors and their consequences significantly more often than LD students, while also exhibiting significantly more emotional discharges than LD elementary students. The ability to prepare themselves better for stressful situations may be due to the cognitive differences of LD and regular students while again emotional discharging, such as expressing negative feelings etc., would be indicative of a student's maturity at that age level.

**Hypotheses II and V**

**Elementary/secondary LD students' anxiety and coping skills**

According to Yamamoto (1982), there were significant differences between anxiety levels as students increased in grade with fourth and fifth grade being significantly different from students in the sixth grade. Honig (1988) in another study found that older children were much...
more distressed by anticipation of tests, report cards, and personal appearance. Grolnick and Ryan (1990) suggest that for LD students, labeling becomes more of a difficulty for students after the elementary years.

Although not to a level of significance, general mean scores for secondary students experiencing anxiety were higher than elementary LD students. Test taking, rejection by peers and expectations of others were also higher sources of stress for secondary LD students than for elementary LD students; however, again these were not significant.

Elementary LD students, however, exhibited higher levels of stress reactivity, indicating that their capacity to handle stressful situations may not be as refined as those of secondary LD students. Even though no one category reached a level of significance, these differences suggest that elementary students either are not yet experiencing the stresses found with increasing academic demands and peer acceptance that occur at the secondary level and thus are more able to cope, or that which is present is not significant.

In general, secondary students tended to exhibit higher mean scores in the area of positive coping skills when compared to elementary LD students. In the area of positive reappraisal, this difference was again significant. For the exception of emotional discharge, elementary students scored relatively close to secondary students on avoidance coping skills. Behavioral reactions to stress by elementary students as exhibited by emotional discharge may be one of the first coping strategies adopted by students at the elementary age or immature students.
in general and may account for the higher scores by elementary aged students in this category.

Hypotheses III and VI

Male/female LD students’ anxiety and coping skills

Literature involving anxiety levels of males and females generally supports the assumption that stress tends to have a greater effect on males than females in both the home and school environment, one exception being with respect to report cards for which girls experience more anxiety than males. In a review of literature, Humphrey (1988) concluded that classrooms tend to be feminized as they are more conducive to the characteristics observed in females such as neatness etc., rather than the aggressive, restless characteristics of boys in the early years, consequently causing more anxiety for males.

In general, research comparing male and female LD students has mainly focused on males (Vogel, 1990). This may be primarily due to the fact that males outnumber females in LD classes from 3:1 to 15:1. Consequently, very little is known about females with learning disabilities.

The results of the present study revealed significant results with regard to anxiety level and coping strategies employed by male and female LD students.

Results of this study suggest that females in general experience more stress in the school environment than male students. This finding was also significant for female LD students. As a group, females
demonstrated significantly higher mean levels for anxiety. Moreover, each major source of stress in the school environment was significant for the female LD students. Female students in this study tended to be more prone to stress than male students. Also, rejection by others such as peers and teachers, anxiety experienced with test taking, and meeting expectations of teachers and parents were significantly more stress-inducing for females than males.

Female LD students also utilized approach coping skills significantly more often than male LD students. Of the four subscales presented in the approach category, female students attempted to take positive steps to alleviate stressful situations more than their male counterpart. In the area of avoidance strategies, females were similar in their use of alternative activities to assist in forgetting the problem existed and accepting the problem as being inevitable and beyond their control. However, they avoided thinking about the problem and demonstrated emotional discharge more often than their male counterpart.

According to Phillips (1972), one possible reason for this result might be the orientation of male students in the school environment. Where Humphrey (1984) suggests that the feminization of the environment causes more anxiety among boys, Phillips (1972) suggests that it does just the opposite. He indicates that the feminine orientation of the elementary school leads to widespread failure for boys, makes school failure more acceptable and less threatening and, therefore, reduces the significance of school failure and thus the anxiety that accompanies it.
Yet another possible reason for the differences in the anxiety levels and coping skills experienced by the LD male and female might revolve around the systematic way that females are placed into LD classrooms and the general differences often found between this male and female population.

A preponderance of the research reveals that females placed in programs for children with learning disabilities function at a lower level intellectually than their male counterparts. Full-scale IQ scores have been found to be significantly higher for males than females. Females also tend to demonstrate verbal inferiority when compared to their male counterparts. In general, females demonstrate more of a generalized cognitive impairment. In addition, females are functioning below grade level on basic skills more than males, and the girls' deficits tend to be more severe.

Often, females with LD are systematically identified less than males. Moreover, they tend to be identified at a later age than their male peers, even though their deficits are as or more severe.

In summary, when females are finally referred for special services, they are older, significantly lower in intelligence, more severely impaired, and have a greater aptitude achievement discrepancy than their male counterparts (Vogel, 1990).

These statistics seem to support reasons for the findings secured in this study. Overall, female LD students appear to have more of an academic challenge than their male peers. Moreover, the lag in placement may result in the experiencing of much more failure by this student in
the regular education environment. Finally, if in fact LD females tend
to be more deficit in skills and abilities, taking tests, living up to
the expectations of themselves and others, and rejection by peers would
likely cause them to be more vulnerable to stress.

With the aforementioned results, it might seem logical that female
LD students would avoid stressful situations more than males as they
demonstrate in this study with the significant differences in the
displaying of negative behavior and cognitive attempts to avoid thinking
about their challenges.

More perplexing, however, is what might account for the approaching
of stressful situations that females utilize significantly more than
males. According to Cardell and Farmer (1989), female LD students tend
to be more adaptable. They also do not typically exhibit the attentional
deficits, hyperactivity and disruptive behavior exhibited by male LD
students (Vogel, 1990). Thus, female students may have the ability to
establish more of a repertoire of positive ways to deal with anxiety. As
a result of having to deal with stress on a more regular basis and for a
longer period of time than males, their ability to utilize positive
approaches may have had the opportunity to be refined; thus, they
resemble more of a level II coper than one that arbitrarily attacks
stressful situations (McNamee, 1982).

Because this study demonstrates that female students exhibit more
anxiety in the school setting than males do, it was encouraging to
discover that often these situations may be dealt with in a positive
manner.
Hypothesis VII

Anxiety and approach/avoidance coping styles

Results of a Pearson correlation indicated that there was a significant relationship between anxiety and coping strategies. Approach coping strategies appear to be utilized the most in anxiety-producing situations; however, avoidance strategies also tend to be used often in high anxiety situations.

Findings from further analysis indicated that regular education students are more discriminating in their use of approach and avoidance skills in low, moderate, and high anxiety situations. They utilized approach and avoidance skills significantly more in high stress situations than in low stress situations. LD students, however, utilized avoidance skills similarly, regardless of the amount of stress being experienced. This indicates that LD students are indiscriminant in their ability to regulate strategies according to level of anxiety and appear to resemble what McNamee (1982) identifies as a coper who approaches situations in a more disorganized and confused manner.

Additional Analysis

Problem situations and coping styles

Finally, problem situations, as indicated by students, were compared to coping approaches to determine if any one problem situation utilized a coping response more than others. Of all groups, positive reappraisal and resigned acceptance had groups that utilized this coping response significantly more than others.
Students tended to use positive reappraisal significantly more often when dealing with problems of extended family members, such as death of a relative, than they did with parent-related problems and school-related problems. This may have been due to the fact that the source of anxiety was not directly involving the student as it would be with fighting with a parent or declining grades in school. Students tend to accept the situation as out of their control more often with extended family member problems than with school-related problems. This may again have been caused by a student's feeling of helplessness in the situation that may be far removed from the student's immediate life. When interpreting these results, however, caution should be exercised as research on these variables is relatively new.

Limitations of the Study

When comparing overall groups in this study, no strong evidence was found to support the contention that regular education students exhibit significantly less school-related stress and employ significantly different coping skills than LD students in general. However, certain additional analyses did reveal that LD students are more prone to stress and are more indiscriminant in the use of their coping skills.

Conceptualizing a framework for stress research involves a great deal of what is obvious. Great diversity exists in the definition of the term stress. Moreover, many related terms are often used synonymously. In the present study, an anxiety questionnaire was used to determine the stress level of students. If one adheres to Lazarus (1966), who suggests
viewing stress as an area encompassing previous, present and past situations, then this mode of assessing a student's stress level is acceptable. However, if one views stress as a phenomenon, independent of the actions that invoke it or the results from it, the instrument utilized in this study may be debatable.

Another shortcoming of this study involved the population of students utilized. As mentioned previously, this school district is presently participating in a pilot study in special education. The Renewed Service Delivery System (RSDS) is currently serving children in special education and those identified for special education services in a way that is in direct reverse of tradition.

Traditionally, students with learning problems are removed from the regular classroom. With the new system, students are being served in regular classrooms with additional help such as collaborative teaching with regular and special personnel. This alleviates the problem of being pulled out, in many instances, and utilizes labeling as a last resort. The implementation of the new service system may have already had an effect on the anxiety experienced by many LD children. However, since pretesting of the LD population was not an option, one can only speculate.

No external measure was utilized for this study. Therefore, it is possible that response bias could have occurred for differences between male and female subjects on levels of anxiety.

Perhaps one of the greatest limitations to the present study involved sample size. The total elementary school LD sample for 4th and
5th grades consisted of only 8 students in total and secondary 6th through 8th grade, 24 students, thus making very small cells for comparison purposes. In addition, LD boys outnumbered girls almost two to one. This, however, is representative of a typical LD classroom as often males outnumber females in large numbers (Vogel, 1990).

Because of the small number of subjects, there were also limitations with regard to the type of statistical analysis performed on data. For this reason, ANOVA controlling for main effects was not conducted. In addition, the subjects were chosen from only two schools within the school district. External variables such as teacher behavior may have been significant in student responses.

Finally, all LD students were system identified as opposed to research identified. Moreover, IQ levels of students were not available to the researcher. Given the nature of the population, IQ variability between LD and regular students and among LD students may have made a significant difference in the ability of one group's vulnerability to stress and ability to cope.

Implications

The present study was experimental in nature as little research has been conducted in this area. However, one can comment on findings from the present study with regard to differences between LD and regular populations and among LD students as they experience and cope with academic stress.
Results of this study indicate that among this population, there were differences in vulnerability to stress experienced by regular education and LD populations. LD students appeared to be more susceptible to stress than regular education students. Further, this study reveals that significant differences were found between secondary LD and regular education students on their ability to handle stressful situations.

Additional results revealed that the differences between male and female students were significant. These differences were not only significant in academic performance of LD females and males, but were also significant with regard to the amount of stress experienced and strategies for coping with this stress.

In general, regular students were more discriminant in the manner that they utilize approach and avoidance coping skills when dealing with different levels of stress. LD students, on the other hand, appeared to be disorganized and confused in their choices, often employing the same types of approach and avoidance skills regardless of the amount of stress they were experiencing. Finally, LD boys utilized approach skills significantly less often than female students and employ avoidance skills similarly.

There is some anxiety inherent in the school environment; and in the majority of cases, students are able to effectively deal with this anxiety. Chronic school stress, however, can have devastating effects on students, especially those with additional challenges such as the learning disabled. The results of this study suggest that the learning
disabled student is more prone to school stress than the regular
education student, especially in the secondary school environment.

Practitioners can do much to facilitate the LD student’s ability
to successfully cope with these academic anxieties. By providing
instruction in successful coping techniques, coupled with a cognizant
effort to eliminate stress in the environment (i.e., instructional and
testing modifications), the teacher can ensure that the LD student will
have the opportunity to maximize his/her academic potential in an
environment with minimal anxiety.

Suggestions for Further Research

Currently, there is a very limited body of research in the area of
stress and coping styles of LD students and the different approaches made
by male and female LD students to alleviate this stress. Therefore,
there are a variety of research options open to the interested individual
with regard to this unique population of students.

The size of the sample studied, while acceptable for exploratory
research, seems to be far from satisfactory. Future research in this
area should involve samples of LD students that are in proportion to the
general school population. Moreover, the male female LD ratio should be
representative of that found in the total LD population.

IQ variables in the LD population are important when considering how
students cope with stress, as cognitive abilities can vary greatly in
this population. Future research in this area should consider IQ as an
important variable, as it can have a significant impact on how students cope with stress.

The population for this study was taken from a small midwestern school district that is primarily homogeneous in ethnic make-up. To generalize findings to a more representative population, a study such as this should be conducted in a school district with a more heterogeneous group of students with regard to ethnic make-up and SES status.

Finally, one's ability to cope in stressful situations depends on a number of variables, an extremely important one being a student's resources for support found in the home. This element can make a great difference with regard to how a student handles stressful situations. External resources available to students outside of school such as parents and significant others and the functioning ability of the family should be taken into consideration in a study such as this, as often home and school stress overlap.
REFERENCES


Moos, R. H. (1989). *Coping Responses Inventory - Youth Form*. Social Ecology Laboratory, Department of Psychiatry, Stanford University, Palo Alto, CA.


ACKNOWLEDGMENTS

There are several people I would like to thank for their assistance during my doctoral endeavors:

First, to Dr. Larry Ebbers, for his guidance and unyielding support, always available and ready to assist when I was confronted with yet another challenge;

To each of my additional committee members, Dr. Fred Dufflemeyer, Dr. Dale Baum, Dr. Richard Warren, and Dr. Tom André, each of whom in his own way contributed to my personal and professional growth;

To Damon Lamb, the psychologist I aspire to be; and

To the Marshalltown school district, for its cooperation and flexibility when I needed it the most.
APPENDIX A. INFORMED CONSENT
November 1990

Dear Parent or Guardian:

We are writing to ask your cooperation in a joint research project between Natalie Davenport, a doctoral candidate in the College of Education at Iowa State University and the Marshalltown School District. The purpose of this study is to identify those school experiences that students rate as anxiety producing and the coping skills they employ to confront these experiences.

Those students who are participating will be given two questionnaires to complete. The Children's School Questionnaire identifies school situations that may be anxiety producing for students, such as test taking. The Coping Response Inventory - Youth Form assesses coping responses used by students in stressful situations. The total testing time will be approximately 45 minutes. Students in grades 4 - 8 will be participating in this study. All questions will be read verbally by the test administrator to any child needing assistance.

Each child will be identified by a code number assigned to him/her. Names will not be used on testing forms. A composite of each child's coping responses and school anxiety level will be developed from test data. Your child's composite will be available for you and your child's teacher. Otherwise, all research data will be kept strictly confidential.

Library time will be available for any child not participating in this dissertation project. If you choose not to let your child participate, be assured that your decision will in no way affect your child's progress in school.

If you have any questions, please feel free to contact either person listed below. Thank you for your cooperation. We look forward to having your child participate in this exciting school-university project.

Sincerely,

Natalie Davenport  
Doctoral Candidate  
Iowa State University  

Dr. Larry Ebbers  
Chair Professional Studies  
Iowa State University  

Mary Mack  
Director Learning Disabilities  
Marshalltown School District
APPENDIX B. LETTER OF APPROVAL FROM MARSHALLTOWN

SCHOOL DISTRICT
November 8, 1990

TO: Natalie Davenport  
   Iowa State University

FROM: Bonnie Twedt  
       Director of Special Services  
       Marshalltown Schools

RE: ISU HUMAN SUBJECTS COMMITTEE

Upon review of your research request for involvement in our special education classes, I find no endangerment of human subjects. Your inventory is age appropriate and reasonable for the intended population. In addition, you properly propose to receive parental approval for the inventory usage.

Your request is granted.

Bonnie Twedt

[Signature]
APPENDIX C. CHILDREN’S SCHOOL QUESTIONNAIRE
PLEASE NOTE

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

83-85
87-91

University Microfilms International
APPENDIX D. COPING RESPONSES INVENTORY - YOUTH FORM