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## Relaxation as a stress reducer for young children ages 4-7

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## Relaxation as a stress reducer for young children ages 4-7

### Abstract

When Hans Selye (1984) attempted to trace the history of stress, he stated, "It would be natural to start with the discovery of stress, yet it seems as though, in a sense, man always knew about this condition and even now still fails to grasp its essence completely" (p. 4). Selye presented a variety of medical treatments that have evolved through time. They have linked stress to disease production. In addition, these treatments date back to early historic times when witch doctors were called upon to banish demons.

RELAXATION  
AS A STRESS REDUCER  
FOR YOUNG CHILDREN AGES 4-7

A Graduate Project  
Submitted to the  
Department of Curriculum and Instruction  
In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts in Education  
(or Master of Arts)  
UNIVERSITY OF NORTHERN IOWA

by  
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This Research Paper by: Katie Heikens

Entitled: Relaxation as a Stress Reducer for Young  
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has been approved as meeting the research paper  
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## CHAPTER I

### INTRODUCTION

When Hans Selye (1984) attempted to trace the history of stress, he stated, "It would be natural to start with the discovery of stress, yet it seems as though, in a sense, man always knew about this condition and even now still fails to grasp its essence completely" (p. 4). Selye presented a variety of medical treatments that have evolved through time. They have linked stress to disease production. In addition, these treatments date back to early historic times when witch doctors were called upon to banish demons.

Regardless of the evolution of these treatments, one factor still remained to haunt the then young medical student in 1925. Why did physicians focus their energies only on recognizing an individual disease and finding its cure rather than studying what Selye termed the "syndrome of just being sick" (Selye, 1984, p. 17)? Even though he recognized the importance of discovering these remedies, he felt it "would be even more important to learn something about the mechanism of being sick and the means of treating this

'general syndrome of sickness,' which is apparently superimposed upon all individual diseases!!" (p. 18).

A universal authority on stress, Selye stated that the only way to avoid stress is by dying. It is therefore safe to assume that to live is to experience stress. Adults deal with stress on a daily basis. The car breaks down, a change in job occurs, an unexpected bill arrives, but what about stress in the life of a young child?

Early childhood classrooms are full of excitement and activity. This atmosphere creates a variety of mixed emotions for most young children. They are eager to please their teachers, to be accepted by their peers, and to be seen as valuable group members. With this membership experience, the child also encounters stress.

What is this term we label as stress? "Stress is the nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions" (Selye, 1984, p. 74). Selye observed that since stress is an abstraction, it can only be explored abstractly.

Elkind (1989) explained stress as "the wear and tear on our bodies that is produced by the very process

of living" (p. 143). He further stated that stress can be attributed to "any unusual demand for adaptation that forces us to call upon our energy reserves over and above that which we ordinarily expend and replenish in the course of a twenty-four-hour period" (p.145).

In attempting to describe stress, Selye developed the General Adaptation Syndrome which he also referred to as the Stress Syndrome. Selye divided the syndrome into three stages: the Alarm Reaction, the Stage of Resistance, and the Stage of Exhaustion. Everyone alive experiences the first two stages many times in their life. They may initially become alarmed in a situation, but adjustments are generally manageable. Selye further observed that only the traumatic or serious stress will lead to the third stage of exhaustion and eventually death. Some exhaustion can be reversible though, if a body is allowed the necessary rest that is needed for revitalizing him or herself.

Is all stress negative stress? According to Selye, this is not necessarily so. Eustress is pleasant or good stress; whereas, distress is unpleasant or harmful stress. Since both forms elicit identical responses in the stress syndrome, and



eustress results in less wear and tear, Selye concludes that successful adaptation is all in the way a person handles the stress.

How did young children become indoctrinated into the world of stress? In 1957, Americans stood by in disbelief as Russia launched Sputnik into space. This spurred a major curriculum movement in the United States in which universities became involved in curriculum writing. As a result, educational expectations soared high and developmentally inappropriate practices for young children began to evolve (Elkind, 1988). Today we realize that children are not just mini- adults, but rather, individuals with their own unique set of needs. However, in the 1960s, children were expected to learn regardless of where they were in their development.

America was then faced with the problem of what to do with their disadvantaged children who were unable to cope with these high expectations. At this point, the concept of Head Start was conceived. Head Start was the answer to school readiness for all children, but it was also becoming a major issue.

With these changes, children were growing up in a pressured environment. They were expected to learn

more at an earlier age and perform what adults expected them to perform. It is no wonder these children felt cheated out of a childhood they were never allowed to fully experience and enjoy. Elkind (1989) referred to this betrayal when he stated that many adolescents felt they were pushed to grow up, and yet, they were supposed to remain a child at the same time. When some children received these mixed messages they became confused and sometimes troubled.

Also, some other factors compounded these pressures. Divorce, crime, and abuse have been on the increase since the 1960s. These and other agents that cause stress are called stressors.

What do children view as stressors in their lives? In a study by Dickey and Henderson (1989), children in kindergarten, first, and third grades were asked to identify the stressors in their lives and to describe the coping strategies they used to deal with them. The children were interviewed individually and asked two questions: (a) What worried them at school? and, (b) how did they resolve these worries? The most frequently identified stressor was school work (26.8%). Peer relationships was the second most commonly identified stressor (21.0%). The two most

frequently identified coping strategies were those of using a direct action to eliminate the stress and distracting themselves from the stressor. Children identified the third most frequently used coping strategy as seeking support from others. In one study, out of 349 student responses, only 13 students (3.7%) chose relaxation as a way of coping with stress. It appears that children can benefit from being directly taught about how to deal with the stress in their lives.

#### Purpose of the Study

The purposes of this study are the following:

1. To learn about stress and how it affects young children.
2. To discover how relaxation can alleviate distress.
3. To describe a specific program designed for young children which helps them reduce or eliminate negative stress reactions.

In order to achieve these purposes, six pertinent questions were asked, and a review of the literature was undertaken in order to answer each question.

1. What is stress?
2. What are some of the most common stress factors that are experienced by children?
3. What are the consequences of stress in children?
4. What are the benefits of relaxation?
5. What are some relaxation techniques that are appropriate for young children?
6. What is a specific program designed for young children to help them alleviate negative stress reactions?

#### Need for the Study

In David Elkind's preface to his revised edition of The Hurried Child (1988), he cited statistics to support his belief that children were better off twenty years ago than they are today. The nation has witnessed: childhood obesity is increasing by 50%, teenage suicide and homicide rates are tripling, and 15-20% of kindergarten children are repeating a grade. Nearly a decade after his book surprised the nation, Elkind reflected on the reasons changes had not occurred after he revealed to the nation that children do indeed experience stress. "The conception of child competence is much too functional for it to be given up

just because the research, clinical experience, and expert opinion concur that it is both incorrect and unhealthy" (p. xiv). He wrote that "children are the unwilling victims of societal upheaval and change" (p. xiv). Elkind further stated that now more than ever, children need adult advocates to defuse the theory that unrelenting stress is normal and beneficial for young children.

If educators believe that our nation's children are a vital resource of the future, they must arm the children with the knowledge necessary to help them become the best they can possibly be. When stress stands in the way, it inhibits this opportunity, and it stunts their inward growth potential.

In order to enhance this potential, educators must take responsibility for exposing children to a variety of stress reduction techniques. Some of these techniques include, but are not limited to deep breathing, progressive relaxation, yoga, imagery, fantasy, and meditation. The common factor shared with all of these techniques is body relaxation that leads to stress reduction.

### Limitations of the Study

Although stress is a common word in the 1990s, the term is still used generally in reference to adolescents and adults. Early childhood research concerning stress has been extremely limited. As a result, very few programs have been designed to help young children deal with the stress in their lives. This study will therefore not be a comparison of such programs, but rather a search for evidence that these programs need to exist. Hopefully, when this need is recognized, appropriate programs will emerge and children will receive the guidance and support they so desperately need from adults.

The second limitation of the study dealt was the unavailability of a large university library. Since this paper was written in a rural midwestern community, access to a major university library was somewhat limited. Dissertations, research articles, reviews, and books were difficult to locate; however, the effort and results in locating some information proved worthwhile.

### Definitions

The terms used in this paper are defined in the following ways:

Acute Stress--stress that occurs quickly and is short lived.

Alarm Reaction--is the initial response when stress occurs.

Chronic Stress--stress that occurs frequently and causes long-lasting negative stress responses.

Deep Breathing--a form of relaxation where the subject deeply inhales and exhales as slowly as possible.

Distress--any harmful or unpleasant stress that may cause disease.

Eustress--"Pleasant or curative stress" (Selye, 1984, p. 466). Good stress.

Fantasy--a form of relaxation used to expand the imagination and reduce tension. "Fantasy is at the core of the thinking/learning process." (Anderson, 1980, p. 40)

General Adaptation Syndrome--general stress in the body consisting of three stages: the alarm reaction, the stage of resistance, the stage of exhaustion (Selye, 1984). Also referred to as G.A.S..

Imagery--a form of relaxation where the subject envisions and paints pictures in their mind.

Kiddie QR--a relaxation program for young children that uses a six-second approach for regulating stress responses. (This is referred to as "Quieting Response")

Meditation--a quiet time set aside for reflection. "Meditation is a very soothing, relaxing way of coping with the stress and anxiety of daily life" (Garth, 1991, p. 16).

Relaxation--a state induced by a variety of techniques such as yoga, imagery, meditation, to reduce tension and anxiety.

Stress--"is the nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions" (Selye, 1984, p. 74).

Stressor--is an agent that causes stress.

Stress Syndrome-- also referred to by Selye (1984) as the general adaptation syndrome (G.A.S.).

Yoga--balancing energies in the body by using a variety of body postures.



## CHAPTER II

### A REVIEW OF THE LITERATURE

Every child experiences some form of stress. Some children may deal with the loss of a loved one, others may suffer a debilitating illness, still others may be faced with migrating from place to place so their parents can find work. These stressors are as varied as they are many.

Almost any event in life can be labeled a stressor. The birth of a sibling, the death of a grandparent, a change in schools, all of these events have the potential for creating stress in young children. Stress can be attributed to internal factors such as illness, or external factors such as moving. Children may experience stress as acute stress which is stress that occurs quickly, is short-lived, and has few lasting consequences. On the other hand, children may encounter chronic stress which is stress that occurs frequently, lasts longer, and can affect the functioning of the child (Honig, 1986). Since we recognize that a multitude of stressors do exist, the issue then is not necessarily labeling these stress factors, but rather, looking at how they affect young children.

The consequences of stress in children have been documented (Ragan & Hiebert, 1987). These consequences include: asthma, ulcers, headaches, stomach maladies, and sleep disorders. Dickey and Henderson (1989) add fluctuating moods, a decrease in attention span, and misbehaving to this list. Bauer (1987) warned parents to be aware of the signals a child exhibits when experiencing excess stress. These symptoms, Bauer noted, were increased irritability and aggressive behavior, development of abnormal speech patterns such as stuttering, physical signs such as nail biting and bed wetting, and a proneness to accidents or clumsiness.

Honig (1986) developed a list of 33 signs of stress in young children. Included in this list of tendencies were the following: daydreams often, tantrums frequently, is clingy with adult caregiver, cries often, has nightmares, acts sullen and rarely smiles or laughs. Seyle (1984) described some self-observable signs of stress. These signs are evident when a person exhibits a change in appetite, an increase in pulse rate, blood pressure, and sweating, a dryness in their mouth and throat, impulsive or irrational behavior, difficulty concentrating, anxiety

and tension, increased motility, a change in organ functions such as urinating often, having diarrhea, or vomiting.

Bauer (1987) claimed that adults are capable of recognizing physical stress symptoms; whereas, children are not able to associate these symptoms with stress. Children's awareness of stress is that they are not feeling well. According to Bauer, this lack of maturity makes it difficult to deal with stress in children.

"During the preschool years children cannot say what they are feeling and may respond to stress by whining, crying, exhibiting extra good behavior, showing an increase in fantasy or through an increased need for physical contact" (Warm, 1989, p. 13). Piper (1988) reiterated this by saying that just because children are not able to express verbally what they are experiencing does not mean that stress does not exist, for they find other ways of expressing it. It is, therefore, the responsibility of the parent or caregiver to become aware of and monitor these signs and symptoms of stress and tension.

"Caring adults give purpose and direction and relief to the overly stressed child's life" (Anderson &

Fulton, 1987, p. 13). What happens when the adults in a child's life are experiencing stress? Miller and McCormick (1991) warned that inevitably there will be signs of stress with the child in whatever setting this occurs. Whether the setting is in the home or at school, the adult needs to be aware of the osmosis effect (where the child takes on the stress of the significant adult) and be watchful for signs that the child may be experiencing second-hand stress.

Anderson and Fulton (1987) told of the importance of the role of the teacher as a support person for the stressed child. They stated that "When teachers help young children feel they have more control over important life aspects, the children may develop sturdier coping skills" (p. 13). By eliminating obvious stressors and by helping the child learn appropriate coping strategies, the teacher enables the child to encounter stress and deal with it directly.

#### Teacher and Children Burnout

Because of today's teaching demands, teachers often find themselves dealing with stress and burnout. Weimer (1987) stated that "Teacher burnout is a painful and destructive response to excessive demands on their strength, energy and resources" (p. 31). Holland

(cited in Price, 1989) described three levels of teacher burnout. These levels were listed as the following:

1. First degree--produced mild, short-lived periods of irritability, fatigue, worry, frustration.
2. Second degree--moderate discomfort lasting two to three weeks.
3. Third degree--accompanied by stress-related physical problems such as chronic back pain, migraines, and ulcers (p. 59).

Weimer (1987) noted that just as teachers are susceptible to school burnout, the same is true for children. Weimer also stated that both teachers and children need to learn problem solving and relaxation techniques to help them successfully cope with the stress in their lives. Piper (1988) supported this idea by saying, "Although the subject has not been directly addressed, the literature clearly shows us that there is as much need for stress management techniques for children as there is for adults" (p. 13).

Children need to be directly taught how to deal with the stress in their lives. Ballinger and Heine (1991) stated that since most children are not adept

with relaxation techniques, they need to be instructed on how to quiet their bodies.

### Relaxation

Relaxation is a word that brings to mind a variety of scenes. Scenes of tranquility, of restfulness, of a letting go of physical symptoms and bodily tension. The mind can conjure up feelings of loftiness and enter into a blissful state of peace when involved in quieting the mind and body. Inside organs and body functions are given a much needed vacation from abuse and everyday wear and tear.

Cherry (1981) observed that the most important factor when introducing school children to relaxation is the teacher. The teacher needs to be a model and an active participant in classroom relaxation activities. Creating a relaxed school environment and modeling the effects of relaxation, benefits both the teacher and the child.

Research on relaxation techniques for children under the age of nine is extremely limited. Assessments of the effectiveness of various strategies for reducing stress have generally included children who are at least nine or ten years of age. Zaichkowsky,

Zaichkowsky, and Yeager (1986) studied stress responses and coping techniques with subjects from first through fourth grade. Their classroom teachers acted as the instructors. The program taught stress management techniques and the effects that stress had on young bodies. The coping techniques used were abdominal breathing, progressive relaxation, and mental imagery. Each student used a finger thermometer to monitor temperature before, during, and after sessions. The results concurred with the 1984 findings of Zaichkowsky and Zaichkowsky when they worked with fourth-grade children. Children were able to control heart and respiration rate as well as regulate their skin temperature. Students whose instructors were committed strongly to the relaxation training, exhibited the most positive effects. Although little research has been done in the area of teaching coping skills to healthy young children, the three authors mentioned previously agreed that stress reduction programs would be beneficial for reducing the frequency of stress disorders when children became adults.

What are some of the benefits of relaxation?

Margolis (1987) wrote that "It is well documented that systematic relaxation reduces stress and many of its

deleterious physical and psychological effects" (p. 355). There is agreement among authorities that by using relaxation techniques, many benefits are evident. These benefits include the following:

1. Levels of tension and anxiety are lowered
2. Gains are exhibited in self-esteem
3. Negative stress reactions are limited
4. On-task behaviors are increased
5. Disruptive behaviors are decreased
6. Attention skills show improvements
7. Feelings of self-worth are exhibited
8. Positive emotional control is gained
9. Classroom atmosphere appears calm and

conducive to learning (Margolis, 1987; Roberds-Baxter, 1984; Krampf, Hopkins & Byrd, 1979; Oldfield & Petosa, 1986; Oldfield, 1986; Matthews, 1986; Seyle, 1984).

Gold (1987) stated that "a variety of techniques for relaxation have proven effective with children" (p. 11). Three appropriate techniques for young children will be reviewed: progressive muscle relaxation, meditation, guided visual imagery and fantasy.

### Progressive Muscle Relaxation

Progressive muscle relaxation is a technique that tenses and then relaxes muscles. Edwards and Hofmeier



(1991) claimed that this technique "can be easily introduced to young children" (p. 63). The authors suggested a time limit of five seconds for tensing a muscle group and ten to 15 seconds for relaxing the tensed group.

Margolis (1987) stated that "Progressive muscle relaxation is based on two of Jacobson's (1938) premises: (a) one cannot be simultaneously relaxed and stressed, and (b) mental relaxation is a natural consequence of physical relaxation" (p. 357). The author noted that students are usually unaware of the tension in their muscles until they practice tensing and relaxing them. Margolis observed that progressive muscle relaxation was a "portable technique" (p. 357) that students could use anytime and anywhere.

Zipkin (1985) referred to Jacobson as the leader who pioneered the relaxation techniques with his progressive muscle relaxation exercises in 1962. These exercises were designed to help increase awareness of tensed and relaxed muscular states. Zipkin also stated that when muscles are relaxed they cannot be contracted. This elimination of muscular contractions results in relaxation.

## Mental Relaxation

Regardless of the setting, every healthy child possesses the ability to breathe. Lowenstein (1991) referred to this magical process as "the breath of life!" (p. 58). The author observed that "All relaxation skills have one true core: deep, even, slow breathing" (p. 58). Deep breathing reduces body tension and restores self-control in stressful situations.

Zipkin (1985) included the following relaxation techniques under "mental relaxation" (p. 286): guided fantasy, imagery, meditation, and concentration. All of these techniques incorporate both the mind and the body.

### Guided imagery and fantasy.

Guided imagery and fantasy use the imagination to visualize and create in an unlimited capacity. Since young children naturally possess this ability, imagery and fantasy often prove to be effective relaxation techniques for this group.

Zipkin (1985) noted that "Guided imagery uses fantasy 'trips' in which the children imagine or visualize peaceful and restful places or situations"

(p. 286). Anderson (1980) stated that "Fantasy is at the core of the thinking/learning process" (p. 40).

Price (1989) wrote that "The procedure of guided fantasy is a mind-calming exercise known as visual imagery" (p. 17). The techniques that can be employed are as follows:

1. The children visualize themselves as relaxed and in a safe place.

2. The children practice deep breathing exercises with eyes closed.

3. Audio/visual instructions are given using a calm, low, monotonous tone of voice. Soothing background music may also enhance the relaxation process.

De Mille (1976) observed that "One purpose of imagination games is to open up closed territory in the mind-to run the train of thought down some of the important common tracks and get rid of unnecessary defensive switches" (p. 21). The result would be the realization that the imagination is safe and limitless. De Mille also noted that these imagery games enhanced the ability to visualize.

Researchers have identified the benefits of using guided imagery and fantasy. Some of these benefits

include success in: reducing bed wetting (Holtgraves, 1986), decreasing tension, lowering test anxiety, reducing fears and inappropriate behaviors, improving self-concepts (Anderson, 1980). Anderson (1980) also stated that "fantasy has been used to increase self-awareness, elicit self-disclosure, and stimulate creativity" (p. 46).

### Meditation

Another form of mental relaxation is meditation. "Meditation is a time for reflection and contemplation—a time to go within" (Garth, 1991, p. 15). Rozman (1985) wrote that "In meditation we learn to contact our inner wisdom by quieting our bodies, our feelings and our thoughts" (p. 2). Margolis (1987) addressed the four elements of meditation as identified by Benson in 1975. The child needs: a quiet undisturbed setting, to be sitting upright in a comfortable and relaxed position, to repeat a word or phrase, to discard any intrusive thoughts.

Rozman (1985) described a procedure for children learning to meditate. The techniques were similar to the four elements listed in the Margolis (1987) study. One difference noted was that Rozman used progressive relaxation first in order to enhance the mind/body

experience. Instead of repeating a word or phrase, Rozman suggested focusing on a space between the eye brows and concentrating on this point, coming back to this point when the mind wandered. After practicing this, the next step for the child was to feel their heart beating and become aware of their rhythmic breathing in order to create a sense of being centered with oneself.

Meditation has often been associated with religious rituals (Seyle, 1984). As a result, people sometimes wonder if meditation goes against their particular religious beliefs or upbringing. Rozman (1985) wrote that meditation "can be used by any person from any walk of life, any religion, any country or any age" (p. 3) since tapping into the spiritual aspect of oneself could be considered a form of prayer.

Garth (1991) suggested twenty minutes a day of meditation to receive the maximum benefits "because meditation can promote calmness, relax tension, and give relief from anxiety as you become detached from your problems" (p. 15). Rozman (1985) expanded on the results of meditation by saying that when children master quieting their own bodies and reaching their center, they gain "a strong sense of inner authority;

questions are answered from within. In the joy, sense of well-being and direct perception that opens up, the child gains self-reliance and can do better in whatever he is interested" (p. 4). The benefit of deep concentration is the final reward as children are directed to achieve their own goals in life.

## CHAPTER III

### KIDDIE QUIETING RESPONSE

Since it has been determined that children are capable of identifying their own stressors and learning coping skills to combat them, then an age appropriate relaxation program for young children should be beneficial. Programs for older children are readily available. However, in researching programs for the younger child, only one such program was located. Stroebel and Stroebel (1980) developed one such program called "Kiddie QR (Quieting Response)".

In 1974, Charles Stroebel, a medical physician, developed a six-second QR to help adults become aware of physical reactions when stressors occurred and to adjust responses to regulate their stress levels. When it was discovered that children easily adapted to learning these body skills, "Kiddie QR" emerged.

Kiddie QR, a program designed especially for young children ages three to eight, teaches simple coping strategies for managing everyday stress. The developers of Kiddie QR recognized that some stressors are necessary for growth and development, but that chronic stress is unhealthy and needs to be alleviated.

With Kiddie QR, children are introduced to 16 Healthy Body Friends and are taught how to find these friends when guided through imagery. Through visual imagery, children are taught how to recognize the body changes caused by stress and how to control their stress responses. QR and his body friends are introduced in sixteen short cassette tape lessons and can be practiced anytime when needed. The lessons focus on skills such as: recognizing stress clues, regulating breathing, reducing muscular tension, slowing down rapid heart beat, and changing body temperature.

Oldfield and Petosa (1986) conducted a study using relaxation techniques with kindergarten through sixth grade children. The objective of the study was to observe children in the school setting to see if utilizing relaxation techniques would result in children tending to tasks for longer periods of time. The Kiddie QR program was used for the kindergarten and first grade children, and the QR was used with the older group of second through sixth graders. Participating students in the experimental group were observed to be on task 89% of the time, whereas the control group exhibited 78% attention to task. Results



indicated the importance of employing a relevant program for inducing relaxation in order to improve concentration skills.

Another study, completed by Ragan and Hiebert (1987), was designed to study the effectiveness of the Kiddie QR program and to observe any effects QR may have on children's levels of anxiety or self-concepts exhibited in the learning environment. Four teachers from a middle class suburban school volunteered to participate in the study. As a result of several unforeseen factors, no significant results were reported by the researchers. Some of the factors that affected the final results were: initiating Kiddie QR the last quarter of school as opposed to integrating at the beginning of the school year, the need for monitoring teachers attitudes, commitment to the program, and the degree to which their students practiced the relaxation techniques.

Changes that were not reflected on the final results were notations made by the students themselves. This data indicated that, regardless of posttest results, the children claimed to have benefited from the Kiddie QR training. Some of the children reported they used the stress coping techniques in a variety of

settings both in and out of school. Ragan and Hiebert (1987) reported that "the children said they liked the tapes, found the exercises fun, and generally thought the QR body friends were good to have around" (p. 279). The authors posited that Kiddie QR held "promise" for not only helping children deal with stress in their lives right now, but also perhaps as a stress preventative for later in life.

Gerler and Danielson (1984) also claimed that the Kiddie QR held promise. The study was conducted using fourth and fifth grade students from comparable schools. Sixteen counselors were randomly selected to participate in pairing QR instruction with success imagery (SI). In the first phase of the study, the counselors taught QR to the students to help them reduce levels of stress and anxiety. Imagery was also introduced at this time. The second part of the study involved more structure. Counselors used success imagery (SI) scripts to help students prepare for SRA tests. The scripts were used 10 days prior to administering the SRA. The students also practiced QR and were instructed to use as needed during the testing sessions. The reason for pairing QR and SI was to help students relax and feel confident that they would do

well on SRA. The results reflected this idea. Gerler and Danielson (1984) summarized their findings by writing that the "study demonstrated that a given imagery strategy (SI), when used in combination with a given relaxation technique (QR), can help minimize the debilitating effects of anxiety and stress and score higher on standardized tests" (p. 155).

Another study that evaluated the Kiddie QR program was conducted by Disorbio (1983). The effectiveness of using Kiddie QR in the elementary school setting was examined using 55 kindergarten through fifth grade students. Factors being observed were: gender differences, biofeedback information, and levels of anxiety.

Disorbio (1983) purposed the following questions for the study:

1. Is there an improvement in ability to relax, before presentation of a stressor, for children receiving Kiddie QR Training as compared to a control group, measured by right index-finger skin temperature and forearm extensor electromyograph activity?
2. Is there an improvement in stress recovery, following presentation of a stressor, for children receiving Kiddie QR Training as compared to a control group, measured by right index-finger skin temperature and forearm extensor electromyograph activity?
3. Is there an improvement in anxiety proneness in children receiving Kiddie QR Training as

compared to a control group, measured by the Spielberger State-Trait Anxiety Inventory for Children (1973) the Digit Span Subtest of the Wechsler Intelligence Scale for Children-- Revised (1974)?

4. Are there differences on all measures between the boys and girls receiving Kiddie QR Training and the boys and girls of the control group? (p. 9)

The results of the Kiddie QR Training program evaluation indicated the following: improvements were noted in the ability to relax before a stressor was presented but not following the stressor, reduced anxiety proneness was evidenced in the Wechsler subtest, however, no differences were noted with the anxiety inventory measure, no significant gender differences were discovered. There are some factors that may have inadvertently affected the results of this study. At the time, Kiddie QR was a relatively new and "statistically untested technique" with "no normative data available" (Disorbio, 1983, p. 56). Differences in home, school, classroom environments, teacher variance, and climatic conditions, may have influenced biofeedback readings and testing behaviors. The author suggested revision of these experimental conditions, further studies comparing relaxation techniques, and documenting the impact and benefits of the Kiddie QR program for young children.

CHAPTER IV  
SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to learn about stress and how it affects young children, to discover how relaxation can alleviate stress, and to study a specific program designed for young children to help them reduce or eliminate negative stress reactions. In achieving these purposes, the following questions were answered.

What is stress? Stress is the reaction of the body to negative stimuli such as tension and anxiety. The stimuli that produce or cause the stress are referred to as stressors.

What are some of the most common stress factors that are experienced by children? Some commonly identified stressors for young children are: school work, peer relationships, mental or physical abuse, death of a loved one, and divorce of parents.

What are the consequences of stress in children? The consequences of this strain and pressure a child feels or internalizes can be devastating. A wide variety of health concerns may arise such as headaches and stomach pains. Other symptoms that may be

noticeable are an increase in irritability, aggressive behavior, and emotional outbursts.

Some children cope with stress by trying to directly eliminate the stressor. The selected approach taken to eliminate the stressor may or may not be appropriate. Other children react through distracting themselves, ignoring the situation, pretending the stressor does not exist, or seeking support from others.

What are the benefits of relaxation? The benefits of relaxation are innumerable! A general feeling of well-being, of having control over events in life, of being a worthwhile person, are all positive effects of relaxation. Children exhibit lower levels of anxiety and tension, a decrease in disruptive behaviors, and improvement in attention skills.

What are some relaxation techniques that are appropriate for young children? Some relaxation techniques that would be appropriate for young children are progressive muscle relaxation, meditation, and guided visual imagery and fantasy. With progressive relaxation, muscles are first tensed for approximately five seconds and then released and relaxed for 10-15 seconds. Meditation consists of quieting the mind and

body in order to create a feeling of being centered within. Guided imagery and fantasy involves visualizing and imagining peaceful positive thoughts. All three procedures incorporate deep breathing exercises to enhance the relaxation process.

What is a specific program designed for young children to help them alleviate negative stress reactions? A specific program designed for young children ages three to eight to help them alleviate negative stress reactions or distress is called the "Kiddie Quieting Response" (Stroebe & Stroebe, 1980) often referred to as Kiddie QR. This program does not just use one approach to relaxation, but rather, uses an eclectic approach.

Young children think in concrete terms so it is difficult to explain abstractions to them. When trying to train a child to relax, the child first needs to know what it feels like to be tense. One such example in Kiddie QR, is pretending to growl like an angry puppy so the children can feel their own clenched and tensed jaws.

QR reminds children to breathe deep breaths when they notice themselves panting like a dog. They are instructed to make a Finger House and blow these

breaths into their own Finger House. As the script is read or listened to on tape, the children visualize these body friends and the stories they have to share.

Relaxation for adults has been an important issue this decade. Researchers are noticing that children are beginning to feel the consequences of stress at an earlier age. It will be of utmost importance to review these findings and begin to extend these relaxation techniques downward to the young children of today who will be faced with more stress than we ever dreamed would be possible.

### Conclusions

The following conclusions were drawn from this review of the literature:

1. Based on this study, children do experience stress; however, they can be taught to deal with it more effectively. When working with young children, research suggests the importance of helping them to discover appropriate ways of dealing with stress, thus encouraging them to take responsibility for their own actions and become healthy confident adults.

2. Dealing with stress has been found to be a life-long struggle. According to research, we can make the process easier if we teach children relaxation



techniques and begin practicing with them at an early age.

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