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The Efficacy of Relaxation Training on the Affective Behavior of Early Elementary Minority Students

Mary L. Veele
Western Michigan University

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THE EFFICACY OF RELAXATION TRAINING ON THE
AFFECTIVE BEHAVIOR OF EARLY ELEMENTARY
MINORITY STUDENTS

by

Mary L. Veele

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
December 1987
THE EFFICACY OF RELAXATION TRAINING ON THE AFFECTIVE BEHAVIOR OF EARLY ELEMENTARY MINORITY STUDENTS

Mary L. Veele, Ed.D.
Western Michigan University, 1987

The relationship between affective behavior and academic achievement has been addressed by a community based education program for minority student achievement in a southwestern Michigan school district. The purpose of this quasi-experimental study was to investigate the effectiveness of selected components of the intervention program whose design or goal was to change the affective behavior of early elementary Black students enrolled in the community based education program. It was hypothesized that there would be a difference in affective behavior between groups of children who received regular training or intensive relaxation training; between boys and girls; and among Grades 1, 2, and 3 students. It was also hypothesized that a relationship existed between the frequency of attendance at training sessions and the change in affective behavior.

Change in affective behavior was measured by the pre- and posttest ratings of school classroom teachers and program site teachers on the Behavior Rating Index for
Children (BRIC). In addition, data on the frequency of occurrence of school discipline referrals and suspensions were collected for each of the 120 children enrolled in the community based education program.

Results of the hypothesis testing indicated that there were differences between males and females in the frequency of discipline referrals. It was also found that a relationship existed between the frequency of attendance in the relaxation sessions and affective behavior change as measured by program site teachers. Although a decrease in the frequency of disruptive behavior was noted at the conclusion of the intervention period, statistically significant differences were not found in measured change between regular or intensive relaxation training or among grade levels. Implications of the findings for programming and further research are included in the study.
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ACKNOWLEDGMENTS

It is with deep appreciation that I acknowledge the great outpouring of help, support, and encouragement of many individuals who have made it possible for me to complete the doctoral program. It is important for me to first give credit to the Source of this provision, by whose divine power and grace I have been carried through this project. Thank you, Spirit! Thank you, God!

The human support has been immense during the past 4 years of doctoral study and completion of the dissertation. With sincere gratitude I thank my graduate advisor and dissertation chair, Dr. Charles Warfield, for his ongoing inspiration and vision, regularly offered, especially at the times when most needed. I also express appreciation to my other advisory committee members. Dr. James Sanders provided conceptual clarity and timely feedback in the refinement of the study. Dr. Martha Warfield offered consistent encouragement and immeasurable assistance with the data collection process. Thank you, Advisory Committee!

There have been numerous other individuals and groups who have lent assistance and support to this endeavor. I am especially grateful to the following: Cynthia and Dean Halderson, Jan and Bill Lambright, Gail Stockholm,
Margaret Neill, "Miriam's Group," Nellie Stell, Michael Donenfeld, Martha and Jack Jenkins, the late Leon Strauss, Sindi and Rick Stravers, Katie and Michael Brana, Lee Pakko, the staff of Sara Swickard Preschool, the College of Education faculty and staff, the Merze Tate Center staff, the Kalamazoo Chapter of the American Association of University Women, the Community Based Education Program staff and children, and the many others who helped along the way. Thank you, dear friends! Thank you, Western Michigan University! Thank you, Kalamazoo!

While my extended family is very large, my immediate family is quite small. It is to my precious daughter, Sarah, that I dedicate this effort, and also to the memory of her grandfather, the late Mike Veele, who together have always believed in me and inspired the courage to continue. Thank you, Dad! Thank you, dear Sarah!

Mary L. Veele
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CHAPTER I

BACKGROUND AND PROBLEM STATEMENT

The purpose of this study was to investigate the effectiveness of selected components of an intervention program whose design or goal was to change the affective behavior of early elementary Black students enrolled in a community based education program (CBEP) for minority student achievement in a southwestern Michigan school district. It was hypothesized that there would be a difference in affective behavior between groups of children who received regular training or intensive relaxation training; between boys and girls; and among Grades 1, 2, and 3 students. It was also hypothesized that a relationship existed between the frequency of attendance at training sessions and the difference in affective behavior.

Introduction

Numerous challenges face American education as the nation enters the 21st century. Among the most important issues confronting educational leaders are the rapidly changing demography of the country with a growing "majority minority" population (Hodgkinson, 1986a, 1986b) and the continuing public concern regarding discipline in
American schools (Gallup, 1986).

According to Garibaldi (1986), the educational progress for any ethnic group in the United States largely conditions the economic and social mobility of its members. He further asserted that despite the equal educational opportunity legalized in the landmark case of Brown v. Board of Education (cited in Garibaldi, 1986), American education faces crises which are adversely affecting minorities and their hopes for bright futures.

The American education crises to which Garibaldi (1986) referred may be examined in light of contemporary national culture and specifically of minorities in the society. According to Hodgkinson (1986b), there is still a tendency to think of the typical American family as the working husband, the housewife, and two school children. In 1986, that description fit only 7% of American households. Hodgkinson (1986a) asserted that "demography is destiny" (p. 273). Understanding demographic phenomena is essential to understanding the challenges confronting American education of the 20th and 21st centuries. Hodgkinson's (1986a, 1986b) work presents the realities for the 3.6 million American 4-year-olds in 1986 who are the entering freshman class of higher education in the year 2000. What is known about these youth is that:

1. Twenty-four percent of them live below the poverty line.
2. Far fewer are White, suburban, and middle-class than in previous decades.

3. One-third are nonwhite, though minority cannot be considered synonymous with poor since "Blacks, Hispanics, and Asians have large and growing middle classes and span almost as broad a socioeconomic range as whites" (Hodgkinson, 1986a, p. 273).

4. Eighteen percent were born out of wedlock.

5. More than 45% of them will be raised by a single parent before they reach their 18th birthdays.

6. Fifteen percent speak a first language other than English.

7. An increasing number have physical and emotional handicaps.

8. Fifty-four percent of them receive some form of day care as their mothers work outside the home, and two-thirds of the children will have working mothers by the time they reach school age.

9. Twenty percent of the girls will become pregnant during their teen years.

Minority enrollment as a percentage of total enrollment in public elementary and secondary schools increased during the 1970s, particularly in large cities (Snyder, 1986). According to Hodgkinson (1986b), fully 27% of all public school students in the United States represent minorities. Black and Spanish-speaking children comprise
the "majority" in many of the country's largest metropolitan school districts. Each of the nation's 24 largest city school systems has a "minority majority."

This trend is expected to continue. Projections from the Bureau of the Census (cited in Hodgkinson, 1986b) indicate that nearly all of the increases in school-age population between 1985 and 1990 will be made up of minority children. Hodgkinson (1986b) added to this prediction that by 2010 or thereabouts one in every three Americans will be Black, Hispanic, or Asian-American.

From the examination of demographic factors that are already having an impact on American education, and will continue to do so into the 21st century, implications may be drawn that affect public school instruction. Hodgkinson (1986b) offered a powerful challenge:

The future of American public education depends on how well it prepares to handle the minority children now flooding into the nation's elementary schools. If they fail, we will have failed; if they do well, we can take pride in a job well done. (p. 11)

In addition to demographic trends, it is pertinent to this study to assess public opinion toward the public schools (Gallup, 1986). Annually, the Phi Delta Kappa-Gallup Poll has been conducted as "a continuing source of reliable information concerning trends in opinion about significant school questions" (p. 43).
In 16 of 18 polls that have been conducted, discipline was consistently rated as the most important problem facing public schools. For the first time in the survey's 18-year history, the American public in 1986 identified drug use by students as the most important challenge. However, school discipline was rated as the second most important problem, with more than half of the respondents mentioning either drugs (28%) or discipline (24%) as the biggest problem facing local public schools. The 1986 best-educated respondents—those with college degrees—continued to perceive discipline rather than drugs as the schools' most important problem.

As demographic trends reveal the increasing diversity of American schools, public opinion continues to view school and classroom behavior and discipline as a major concern. Educational experts promoting "effective schools" (Brookover et al, 1982) identify schools where achievement is high, the student body is diverse, and school discipline is well managed. The effective schools experts indicate that higher achievement is associated with effective management of behavior. They further assert that the problems of school and classroom discipline must be understood in relation to achievement. When the school learning climate is the focus of the greatest emphasis of the school and classroom, other behaviors are less likely to detract time and effort from that
fundamental purpose. When educators become so involved in how to deal with problem students, they often forget why misbehavior occurs. Overwhelmingly problem children are those pupils who are unsuccessful in the learning realm and turn to other means of satisfying needs for success and attention.

The effective schools proponents also cite the students' self-concept of academic ability and the student learning climate as factors which are strongly related to achievement. Brookover et al. (1982) found that most students with low academic self-concepts are low achieving. Where academic futility exists, there is a sense of hopelessness and students experience strong feelings that the system is stacked against them and no matter what they do they cannot overcome racism, poverty, etc. Schools which have high levels of student futility have low achievement. Schools which are low in a sense of futility generally have high achievement. Students have to not only believe in themselves, but also believe that their efforts can make a difference in school and later life.

For many Black children, the appropriate learning climate and the accompanying high motivation to achieve do not exist. According to White (1984), the situation confronting Black children in the American educational scene is a dismal picture of failure. Often the failure of the educational system is transferred to the student,
particularly the minority student, who frequently bears the burden of failure (Glasser, 1969). Coupled with lower academic achievement, as a group, minority students are regularly assessed with exhibiting behaviors disruptive to standard classroom functioning. Low academic achievement, disruptive/unacceptable school behavior, and low sense of worth and self-esteem are commonly related characteristics of children having difficulty succeeding in school settings. For many of these children, the problem is not that they are inherently bad or incompetent; it is rather a question of how much support is being offered to enable these students to experience success (Fadely & Hosler, 1979).

Maximizing the "personal power" of students is one vehicle to increased self-esteem, positive school behavior, and achievement. Schultz and Heuchart (1983) defined personal power as "inner strength, personal integrity, and the capacity to function fully" (p. 168). As a concept, personal power helps to describe the state of being of a person who is concerned with having control or power over self instead of having control or power over others. Gordon (1967), in his detailed review of the Coleman Report, asserted:

The extent to which a pupil feels he has control over his own destiny is strongly related to achievement. This feeling of potency is less prevalent among Negro students, but where it is
present their achievement is higher than that of white pupils who lack that conviction. (p. 123)

Maximizing the personal power of minority students to increase positive school behavior has been investigated by studying the use of relaxation training with early elementary school children.

Statement of the Problem

It has been purported that student learning climate, self-concept of academic ability (Brookover et al., 1982), and personal power (Gordon, 1967; Schultz & Heuchart, 1983) are directly related to appropriate school behavior and successful student achievement. This premise has led the investigator to explore methodology that offers a means of identifying a solution to one of the behavioral challenges confronting cognitive achievement of minority children.

Various forms of relaxation training have been successfully utilized to impact school behavior (Brennan, 1983/1984; Matthews, 1986; Oldfield & Petosa, 1986). It was the purpose of the study to examine the result of a particular form of relaxation training. This study addressed the question: What are the effects of a particular form of relaxation training on affective behaviors of early elementary minority students?
Definitions

For use throughout this study, the following three terms have been defined: (a) relaxation training, (b) affective behavior, and (c) Black students. Additional definitions are included throughout the study for clarification when introducing concepts.

Relaxation training: Relaxation training is "training that emphasizes the acquisition of skills and techniques for managing and reducing stress, anxiety and tension" (Houston, 1984, p. 218). A discussion of various forms of relaxation training follows in the review of literature. The particular form of relaxation training under study is the Programming Aimed at Children's Excellence training hereafter referred to as PACE training. The PACE procedure, utilizing baroque music, breathing exercises, and positive affirmations, is described in detail in Chapter III.

Affective behavior: Affective behavior is "behavior that involves or expresses emotions, feelings, or sentiments" (Houston, 1984, p. 10). The particular affective behaviors investigated in this study are those behaviors observed in school, classroom, or after school program site and measured by the Behavior Rating Index for Children (BRIC). These specific behaviors taken from the BRIC include: (a) feeling happy or relaxed; (b) hiding
thoughts from other people; (c) saying or doing strange things; (d) not paying attention when should; (e) quitting a job or task without finishing it; (f) getting along well with other people; (g) hitting, pushing, or hurting someone; (h) getting along poorly with other people; (i) getting very upset; (j) complimenting or helping someone; (k) feeling sick; (l) cheating; and (m) losing one's temper. The results of the BRIC present a summary of the 10 disruptive behaviors measured by the instrument including items b, c, d, e, g, h, i, k, l, and m.

The second measure of affective behavior is the frequency of discipline referrals of subjects. Discipline referrals to the elementary principal's office are prompted by exhibition of extreme forms or excessive repetition of certain behaviors included in the BRIC. The discipline referrals may be prompted by fighting, using unacceptable language, disrupting other students, disrupting instruction, and exhibiting distracting classroom behavior or inattention. Hereafter, affective school and classroom behavior will be used interchangeably in reference to the aforementioned affective behaviors.

Black students: Black students are those American students of African heritage who represent one minority cultural group of the United States. This study investigated the behaviors of early elementary (Grades 1-3) Black students enrolled in a community based education program.
for minority student achievement. Unless clarified differently, the term "minority students" will be used synonymously with "Black students" throughout the study.

Research Objectives

The purpose of the study was to address the following research objectives:

1. To examine the change in affective behavior of early elementary minority students participating in a community based education program's PACE relaxation training as measured by the pre- and posttest administration of the Behavior Rating Index for Children (BRIC) and the frequency of school discipline referrals.

2. To investigate the difference in pre- and posttest BRIC results and frequency of school discipline referrals between early elementary minority children who participate in regular PACE training (only in the CBEP after school program) and those who participate in intensive PACE training (both in the CBEP after school program and the elementary school they attend).

3. To assess the difference in pre- and posttest BRIC results and frequency of school discipline referrals between early elementary minority girls and boys who participate in PACE training.

4. To examine the difference in pre- and posttest BRIC results and frequency of school discipline referrals
between Grade Levels 1, 2, and 3 of early elementary minority students participating in PACE training.

5. To assess the relationship between the frequency of attendance of early elementary minority students participating in PACE training and change in affective behavior as measured by the BRIC and frequency of school discipline referrals.

Conceptual Framework

The theoretical model underlying the study is based upon research that indicates that the use of relaxation training with students positively influences school and classroom behavior (Brennan, 1983/1984; Matthews, 1986; Oldfield & Petosa, 1986). It has been shown that relaxation training does affect individual attending behaviors and hence classroom social behaviors and subsequently achievement performance. This study focused on the effects of relaxation training on observable social behavior. The conceptual framework is developed further through the review of literature in Chapter II.

Limitations of the Study

This study is limited to an investigation of the results of the PACE relaxation training with early elementary Black students enrolled in a community based education program for minority student achievement. It is
important to note that the focus of this study was on one minority group (Blacks) and the findings are limited to that one minority group. The study is further limited only to those Black students who enrolled in the community based education program and were in Grades 1-3. The research does not address the use of the methodology with other groups of students such as older students, White students, Hispanic students, or other minority students not enrolled in the community based education program.

Although a number of types of relaxation training could have been investigated, the PACE relaxation training was selected because of observed success documented through anecdotal data in previous use with early elementary Black children (Lockett, 1986). The study is examining the efficacy of PACE training on affective behavior only. This investigation has focused upon changes in affective behavior alone. Although the relationship between affective behavior and achievement has been noted, the effect of the training and academic programming upon student achievement is not examined in this study.

Weaknesses of internal validity are inherent in a quasi-experimental nonequivalent control group design. Campbell and Stanley (1966) noted that the most serious threat to internal validity in this type of design is the interaction of selection and maturation.
Another limitation of the study is that no control existed over the assignment of subjects to groups. Groups were formed based upon nonrandom assignment to one of two treatment conditions based upon the number of community based education program participants enrolled in the school district's elementary schools. Selection bias may have occurred in that those who needed the treatment the most may have been unavoidably assigned to a regular instead of intensive treatment condition or may have stopped attending.

Organization of the Study

This study has been organized into five chapters. A statement of the problem, definitions, research objectives, conceptual framework, and limitations of the study have been presented in Chapter I.

In the second chapter, a review of literature and the hypotheses for the study are presented.

Chapter III contains the methods and procedures used to conduct the study. The discussion focuses on the subjects chosen for the study, the instruments used for data collection, the research design used in this study, and the procedures used in data collection.

In Chapter IV, analyses of the data are included with the testing of the research hypotheses.
The final chapter, Chapter V, provides a summary of the study with conclusions and implications of the study for further research.
CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this study was to investigate the effects of a particular form of relaxation training on specific affective behaviors of early elementary minority students. This chapter will expand the theoretical framework for the study as outlined in the previous chapter and review literature pertinent to the topic. Discussion will focus on several dimensions. First, school discipline and affective behavior will be examined. Second, the affective behavior of Black youth will be reviewed. Third, a review of relaxation training with children and rationale for its usage will be reported. Fourth, the history of Programming Aimed at Children's Excellence (PACE) and the Community Based Education Program for Minority Student Achievement (CBEP/MSA) will be described. Fifth, the development of the PACE training, being tested in this study, will be discussed. Finally, research hypotheses pertinent to the study will be presented.

School Discipline and Affective Behavior

The annual Phi Delta Kappa/Gallup Polls document the consistent concern of the American public regarding
discipline in public schools (Gallup, 1986). Education professionals also are concerned about school discipline as a major pedagogical challenge (Robledo, 1980/1981). In a survey of teacher attitudes and practices (NEA, 1980), 54% of the teachers indicated that student behavior interferes with their teaching. A variety of contemporary disciplinary viewpoints and models have arisen to meet the challenge of student behavior in the school and classroom (Rich, 1985). Included among the most familiar theories and practices are Kohl's Natural Development Model with focus upon the "open teacher"; Gordon's Teacher Effectiveness Training, emphasizing communication and active listening; the Social Literacy Approach of Altschuler; Glasser's Deficiency Model, incorporating the themes of need deficiencies and responsibility within the context of reality therapy; Dreikurs's logical consequences; behavior modification; and Canter's Assertive Discipline.

When reference is made to school discipline, negative or disruptive behaviors of students are often brought to mind. Fagen, Long, and Stevens (1975) defined disruptive behavior in the school as "behavior which is incompatible with volitional socially acceptable efforts to master the required or assigned task" (p. 3). It is this disruptive behavior in school that is regularly addressed in school disciplinary action.
Viewed in a broader context, discipline may be approached as a way of life, a system of ordering one's behavior (Wright, 1979). Included among the multiple definitions of the term (Webster's New World Dictionary, 1966) are those meanings related to training in the development of self-control and orderly behavior with its resulting behavior as well as treatment in which control is gained by enforcement of obedience or order usually through punishment or correction. The former relate to self-discipline and the latter to imposed discipline.

Most of the contemporary theories of discipline concur that self-discipline is the preferred means to maintaining a successful school and classroom environment. Educators play a critical role in enhancing the development of self-discipline when they create an environment or climate conducive to practice in this type of self-control. Experts agree that climate reflects the level of morale, trust, caring, and mutual respect experienced by individuals within a school (Maynard, 1977; Smith, 1984; Wayson et al., 1982). Smith (1984) noted that "for maximum learning and growth, the educational climate must be positive, supportive, and rich in experiences" (p. 1). Maynard (1977) further purported that the climate of a school often determines the manner in which disruption is handled and is even often itself a contributing factor to disruptive behavior. Principals and teachers are
encouraged to work together to promote the kind of climate that minimizes disruptive behavior and enhances productive and positive behavior.

Fagen, Long, and Stevens (1975) viewed the acquisition of relaxation training as a means to deter disruptive behavior and enhance self-discipline or self-control, which they defined as "the capacity to direct and regulate one's own behavior" (p. 18). They noted that "a child equipped with usable techniques for physical and mental relaxation is not likely to spill over with diffuse, poorly regulated behavior outbursts" (p. 231). It is the intent of the PACE relaxation training to enhance positive school and classroom behaviors and reduce negative or disruptive behaviors.

Affective Behavior of Black Youth

Understanding what motivates disruptive behavior is a factor in reducing the occurrence of it (Howard, 1978). Shahien (cited in Howard, 1978) stated the following on school discipline regarding aggressive behavior:

I think our aggressive children want us to know that they are bleeding--want us to know that they need help in meeting their human needs. We should be grateful for our aggressive children. At least they are still in there fighting for survival. (p. 169)

Shahien (cited in Howard, 1978) further elaborated upon the relationship between self-esteem and discipline. She
suggested that the child with self-esteem who has his or her basic needs met is rarely a discipline problem.

Just as understanding the motivation behind certain disruptive behaviors is important to the educational team, so also is understanding Black culture critical to the discussion of the affective behavior of Black children (Hale-Benson, 1986; Perkins, 1986; White, 1984). Hale-Benson (1986), in her work on the culture and learning styles of Black children, noted that Black children across social classes are at risk in the traditional educational process. She described how Black children must master at least two cultures (both Black and White). In many ways these cultures are not congruent. Hale-Benson asserted that "parents and educators must help children straddle these cultures and resolve intercultural conflicts if they are to achieve success in school and in the workplace" (p. xv).

In tracing the cultural heritage of Black youth, Perkins (1986) has developed an historical model of their socialization environment in which the environmental characteristics with accompanying behavior outcomes are described. He discussed how African children originally grew up in a supportive environment with stable family unit, close kinship bonds, supportive institutions, and well-defined roles leading them through the culture's Rites of Passage. The behavior outcomes of this
environment resulted in African youth who were highly disciplined and respectful toward family and elders. Pro-social behavior with positive self-concept, cultural competence, and self-appreciation were additional behavior outcomes.

The advent of captivity, middle passage, and induction into American slavery were characterized by death (90-100 million), uprooted kinship bonds, physical punishment, suppression of culture and family, and hostile environment. Perkins (1986) identified a number of resulting behavior outcomes including suppressed and adaptive behavior, psychological scars, damaged and confused self-concept, self-diffusion, cultural incompetence, and depreciated character.

Perkins (1986), based upon research documenting the process of American slavery, drew conclusions about slavery's impact upon the behavior of Black youths. Paraphrased, some of these conclusions follow. Slavery damaged, if not destroyed, the principle socializing elements of African societies, leaving Black youths with few traditional models to enhance their social development. Because of the fragmentation of the family unit and the systematic suppression of adult and parental influence, Black youths were forced to develop their own coping skills. Groomed for manual labor, Black youths were denied educational training allowing them entry into
competitive Western dominated culture. Rarely disciplined for misconduct or violence confined to their own group, Black youths were severely punished when they violated sanctions fostering the institution of slavery. Black girls were sexually exploited at will by White males, and Black male youth were denied their traditional manhood and encouraged to "become sexual gluttons to father children for economic convenience" (p. 17). Black youths learned to inhibit their true emotions, constituting an "oppressed minority within a larger oppressed minority, possessing no rights to arbitrate their destinies" (p. 18).

Perkins (1986) developed his model through the "so-called" emancipation, postreconstruction periods to present times. He indicated that the hostile environment of the American slavery period has continued to exist along with colonized education and culture, institutional racism, and scientific colonialism. Behavior outcomes include adaptive, dependent, suppressed, ambivalent, and reactionary behavior; psychological scars; cultural incompetence; self-diffusion; and confused self-concept.

Despite the negative behavioral outcomes of a societal environment less than conducive to the positive nurturance of Black youth, Perkins (1986) has identified a number of strengths that have marked the youth's survival. These include:
The ability to adapt to an oppressive environment without being totally debilitated by it. . . . The ability to survive with little guidance from formal institutions and a cohesive family structure. . . . The strong desire to be free. . . . A strong group orientation that places high value on peer relationships. . . . The resiliency to recover from setbacks and defeats. (p. 83)

It is hoped that these common cultural strengths as well as others which have deteriorated since slavery survival will be institutionalized as the "harvest" to be sown for future generations through the shaping of a relevant education.

Hale-Benson (1986) indicated that research investigating the mother-child relationship among Black Americans should have strong implications for educating young Black children. Hale-Benson purported that greater continuity should exist between the behavior of the mother and the behavior of the teacher. She expressed the belief that one of the reasons White teachers have difficulty motivating and disciplining Black children is the cultural dissonance that occurs when the teachers behave differently from the way the children expect authority figures to behave. She elaborated:

Black mothers tend to be more firm and physical in their discipline than white mothers. Consequently, when the child encounters a white teacher in school practicing all the techniques she learned in college, the children "run all over her" and are labeled discipline problems. (p. 68)

This is supported in a study of domestic Black women
workers in White households (Dill, 1980) in which the Black women reported observing more permissiveness in the disciplinary styles of the White mothers.

The Hale-Benson (1986) study of Black and White childrearing practices showed a definite tendency toward distinct cultural values related to discipline in childrearing. The Black grandmothers who were interviewed by the researcher were more prone to use corporal punishment than the Whites. Severe compliance demands around obedience offenses were reported by Black grandmothers. They believed strongly that children should be punished for talking back to adults, for disrespect of elders, for disobeying adults, for disobeying older siblings, for being irresponsible with money, and for not fighting back when assaulted.

Returning to the issue of classroom discipline, Hale-Benson (1986) related that the management of the behavior of Black children in the classroom is a concern of both Black and White teachers. However, little systematic research exists to provide insight into the problem. Therefore, Black children, particularly males, are often regarded as unruly, aggressive, and difficult to manage. In reconceptualizing the behavior management of Black children, it must be acknowledged that there are no physical developmental norms for Black children. Although it is generally assumed that the physical development of all
children conforms to the pattern identified for White children, a disproportionate number of Black children have been identified as more active than White children, and have been labeled hyperactive.

Hale-Benson (1986) suggested that many of the discipline problems teachers experience with Black children may be caused because the children are expected to conform to a White behavioral model. It is suggested that teachers can avoid behavioral problems by providing both active periods when the children can expend excess energy and rest periods when they become tired and irritable. Promoting adequate rest at night and nutritious dietary patterns are also cited as means to minimize behavioral problems in the classroom.

Relaxation Training Used With Children

If, according to Hale-Benson's (1986) suggestion, behavioral problems of minority students in the classroom are to be minimized, a variety of methods to enhance the learning ability of young children must be utilized. In a world in which stresses of daily living continue to increase with the growing sophistication and complexity of modern society, more and more means are being purported to combat the stress. The recognition of the need to balance activity with rest in the classroom (Hale-Benson, 1986), leads one to explore appropriate techniques to achieve the
desired effect. Relaxation training shows promise for creating the desired restful activity and improving the self-management skills of children (Matthews, 1986; Richter, 1984). It is assumed by those who use relaxation training with children that self-regulatory behavior can be taught, increasing the children's ability to control their lives and be responsible for their behavior.

A number of specific relaxation techniques have been developed and utilized with both adults and children. Included among these methods are progressive muscle relaxation (Jacobson, 1974), biofeedback (Brown, 1977), meditation (Rozman, 1976), transcendental meditation (International Association for the Advancement of the Science of Creative Intelligence [IAASCI], 1984), yoga (Diskin, 1977), the quieting reflex (Stroebel, 1967), controlled breathing (Spreads, 1978), autogenics (Luthe, 1969), and visualization and visual imagery (Bry, 1972; Lazarus, 1977).

Zipkin (1985) pointed out that traditional behavior management methodology relies on outside influences, such as drugs, reinforcement, or therapist intervention, to effect change. She indicated that "relaxation as therapy, is an effective, self-regulatory intervention treatment, which allows the child to develop direct self-control of his or her own behaviors" (p. 283). According to a number of learning specialists (Gordon, 1967; Omizo, 1980), inner
control is an essential prerequisite to learning.

Of the methods listed above, those with the largest bodies of research are the transcendental meditation and biofeedback techniques. Transcendental meditation, popularly known as TM, has been the subject of more than 350 scientific research studies during the 1970s and 1980s (IAASCI, 1984). This impressive body of literature documents the physiological, psychological, and sociological effects of regularly practiced TM. However, in this sizable listing, no reference was found to a specific study related to the school and classroom affective behavior of children. However, the methodology has been supported as a procedure to be investigated for use in the field of special education (Ferguson, 1976).

Biofeedback has been used effectively with individual adults and children for relaxation purposes and for measuring the healing of various physiological disorders. Zipkin (1985) described this process as "the feeding back to a person, through the use of graphs, lights, sounds, and the like, information about the status of the body's functions, such as muscle tension" (pp. 284-285). In this procedure, utilizing mechanical equipment, it is believed that control of biological functions may be gained through mental recognition of the physiological occurrence. Utilized with learning-disabled students, the technique was reported to improve school coping behavior (Carter &
Russell, 1980), social and academic adjustment (Omizo, Loffredo, & Hammett, 1982), and on-task behavior (Amery, 1979/1980). Also studied with hyperactive and cerebral-palsied populations, biofeedback was found to be effective in the reduction of physical and verbal aggressive responses (Hughes & Davis, 1980). The technique has been limited in its usage with large numbers of individuals because of the substantial cost of the equipment involved in the measurement of brain wave changes. The technique is fairly impractical for use outside of clinical environments, thus making its efficacy in school classroom settings rather limited (Richter, 1984).

The progressive muscle relaxation exercises developed and pioneered by Jacobson (1962) in the 1920s and 1930s have provided the basis for most of the relaxation procedures in use in the United States in the 1980s. These exercises involve "the systematic tensing and releasing of muscle groups, leading to an increased awareness of the resulting sensations of tension and relaxation" (Zipkin, 1985, p. 284). Positive effects of progressive muscle relaxation on children were documented in studies of first- and second-grade learning disabled students and their parents (Omizo et al., 1982) and minimally brain-injured children (Carter & Synolds, 1974; Lupin, Braud, Braud, & Duer, 1976). Progressive muscle relaxation and biofeedback used in combination with each other have shown
promising results in studies reported by Rivera and Omizo (1980)—reduced impulsivity and improved attention to task in hyperactive boys; Carter, Lax, and Russell (1979)—improved basic academic skills and handwriting ability; and Braud, Lupin, and Braud (1975)—improved cognition, memory, and handwriting in a group of educable retarded boys.

Yoga is "an ancient and complete system of physical, mental, and spiritual development which incorporates physical postures (asanas), breath control, mental concentration, and deep relaxation" (Zipkin, 1985, p. 286). Yoga as a relaxation technique has been reported to reduce and relieve tension and stress, develop concentration and greater mental clarity, lengthen attention span, improve and maintain general physical health, and cultivate better interpersonal relationships (Diskin, 1977; Hopkins & Hopkins, 1976; Seiler & Renshaw, 1978).

The quieting reflex (QR) was developed by Stroebel (1967) through his work with biofeedback. The 6-second QR was originally developed as a remedial technique so that adults with stress disorders could learn to engage in self-regulation of the tension in their bodies. When Stroebel discovered that younger people learned QR much more easily than older individuals, the procedure was adapted as a preventive technique for teaching young people how to relax. Gerler and Danielson (1984) reported
greater gains in achievement scores of those subjects who received the QR treatment than those who did not. Disorbio (1983) demonstrated that stress responses in children could be moderated using the quieting reflex.

Autogenics is a form of training that makes use of self-talk. Affirmations, the use of positive suggestion, are derived from reinforcement theory which has its origins in the advent of spoken language (Lefrancois, 1985). Case studies reported by Downing (1986) report effectiveness in using affirmations with children in terms of observed behavior changes from parents, teachers, and counselors.

Guided or visual imagery, visualization, meditation, and concentration are forms of mental relaxation which have been found to have a positive effect on creative thinking abilities (Frey, 1980; Hershey & Kearns, 1979). These techniques have been useful in controlling acting-out behaviors (Anderson, 1980), in reducing test anxiety (Deffenburcher & Kemper, 1974), and in helping children relax in various school situations (Davis, 1969; Koeppen, 1974). Meditation and concentration refer to a focusing, directing, or centering of thoughts, feelings, attention, and/or awareness on a particular object, thought, or theme (Morris, 1976). Morris (1976) and Murdock (1979) reported on a group of minority, urban third graders who participated in an 18-week course in which they meditated for 20
to 25 minutes twice a week. The results were a significant lowering of anxiety and increased articulated thinking in the children.

Of particular relevance to this study is the research on relaxation training and various aspects of school and classroom behavior. Most of the studies cited in this area were researched with students diagnosed as hyperactive and in special education or institutionalized settings (Lupin et al., 1976; Richter, 1984). One study was located that dealt with the disruptive behavior of fifth- and sixth-grade students in regular public school classrooms (Wright, 1978). The researcher sought to see if relaxation training would reduce the number of "discipline referrals" among members of the population. The group met daily for 4 weeks, listening to a 15-minute tape. The students received no additional supportive treatment, and no statistically significant reduction in the frequency of referrals was reported.

Another study conducted by Matthews (1986) indicated that there were fewer discipline problems among middle school students who received relaxation training than among those who did not receive the training. In this investigation, daily in-school relaxation exercises were conducted with the experimental groups during a 7-month period. Specifically, problems with fighting and cutting class improved with the use of relaxation training by this
A group of preadolescents.

The benefits of practicing relaxation, though difficult to measure, are immense according to those who regularly practice a specific relaxation technique with children. Rozman (1976) indicated that relaxation enhances the child's self-image. In her words:

[The child] is becoming a master of himself when he can quiet his body, emotions and thoughts to experience the deep center. The child gains 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. The gradual development of deep concentration that goes with meditation becomes part of his character. Then the vibrant and often scattered energy of childhood becomes directed and used, by the child himself, to achieve his own goals. (pp. 16-17)

A number of studies during the 1970s and 1980s have sought to determine the efficacy of relaxation training with children (Richter, 1984; Zipkin, 1985). These extensive reviews of literature report a wide variety of purposes for which relaxation training has been used with children, citing many of the aforementioned researchers. Richter (1984) indicated that there is very little consistency among the studies using a school-age population, and many of the studies do not report controls or are anecdotal in nature. Luiselli, Marholin, Steinman, and Steinman (1979) suggested that 70% of the papers they reviewed failed to indicate how the effects of relaxation were assessed.
The positive effects of various forms of relaxation training have been documented in the preceding pages. However, few of the studies have answered the question, Is more better, i.e., does increasing the amount of relaxation training result in greater gains in affective and cognitive behavior? According to Calsyn, Pennell, and Harter (1984), it seems that the more successful affective education programs had more contact hours or better integration of the program into the regular curriculum than did unsuccessful programs.

Findings suggest that "relaxation training is at least as effective as other treatment approaches for a variety of learning, behavioral, and physiological disorders when it is continued over an extended period of time and is augmented by other supportive measures" (Richter, 1984, p. 319). Richter also noted that generalization of treatment over time may depend to some extent on the length of treatment. The work by Borkovec and Sides (1979) is cited to support this premise. These researchers found in their review of 25 studies on the effectiveness of progressive relaxation that those programs that were successful consisted of twice as many training sessions as did the unsuccessful ones, although all had a surprisingly low number of treatment sessions. Of 13 studies reviewed by Richter (1984), the length of treatment ranged from 2 to 4 weeks for 9 of the studies.
and 5 weeks to 3 months for the remaining 4. These findings provided the basis for lengthening the data collection period in the study under investigation and for exploring the effect of intensity of treatment.

Programs for Low-Achieving Black Youth

A number of programs for low achieving Black youth have been implemented throughout the country. As an introduction to the community based education program examined in this study, a review of other programs is included here. Cody (1984) has identified three types of intervention strategy programs used throughout the United States. These include: (a) federal/national programs, (b) private school programs, and (c) public school programs.

The most well-known of the federal/national programs for low-income and potentially low-achieving children are Head Start and other early education programs, Title I/Chapter I and other compensatory education programs, and PUSH-EXCEL.

Programs for the low-income preschool child such as Head Start employ a wide variety of approaches including basic skills instruction, the enhancement of self-concept and motivation to learn, problem-solving skills instruction, and parental involvement.

Title I/Chapter I and other compensatory education programs are directed at the school-age child and
generally focus on providing additional instruction in reading or mathematics. The extra instruction is frequently provided outside the regular classroom with aides often employed to assist in teaching.

PUSH-EXCEL, founded by the Reverend Jesse Jackson, is a "total involvement" approach aimed at mobilizing students, parents, peers, teachers, church officials, and other community members to work together to develop the motivation and habits which enable children to succeed.

Cody (1984) identified two types of private school programs— independent Black schools and private Catholic schools. Among the most noted independent Black schools are the Muslim Schools, originally called the Muhammad University of Islam, operating 30 elementary and secondary schools throughout the country; the Lower East Side International Community School (LESICS), founded by six Black parents in response to the poor performance of Blacks and Puerto Ricans in the New York City Public Schools; and Marva Collins's West Side Preparatory School, a private school founded for Black children in the heart of Chicago's inner city. These alternative schools are characterized by "high expectations, high motivation, strong discipline, structured instruction, and a match between the culture of the student and the school environment" (Cody, 1984, p. 6).
Private Catholic schools vary in approach but are generally characterized by "structured instruction, strong discipline, intense parental involvement, a decentralized bureaucratic structure, a concept of shared work among staff, a safe, orderly school climate, and a clarity of mission and shared purpose" (Cody, 1984, p. 6).

A number of programs within public school systems have reported successful results. Included among the most notable (Cody, 1984) are: (a) the Washington, DC, Public Schools' combined approach aimed at improving achievement through a competency-based curriculum, student promotion plan, and extensive tutoring program; (b) the New York City Public Schools' Promotional Gates Program; (c) the Austin, Texas, school-wide, in-class programs with low pupil:teacher ratio; (d) Mesa Public Schools' Project Umbrella, which includes a wide range of services targeted at the enhancement of reading achievement; and (e) San Diego City Schools' Academic Goals Program set in the context of magnet programs.

History of Programming Aimed at Children's Excellence (PACE) and the Community Based Education Program for Minority Student Achievement

A southwestern Michigan community counseling center began serving clients in 1979. It was recognized from the onset that services were to be offered not only to adults,
but to children as well. Initially children were welcomed as individual clients. Then group work began on Saturday mornings during the 1982-83 school year. It was during these early sessions, that Programming Aimed at Children's Excellence (PACE) materials began to be developed by Lockett (1986). Lockett (1982/1983) had completed a series of leadership building activities for early elementary students entitled Leadership Is Vital to Education (LIVE). This work served as the springboard for refinement of PACE materials aimed at the promotion of positive self-esteem and achievement motivation in elementary age minority students.

PACE curricula continued to be developed for Saturday morning group sessions during the 1983-84 school year. A 4-week full-time PACE program operated during the summer of 1984. Observable improvement in PACE participants' motivation to achieve and level of self-esteem were noted. As the program was indicating success, curriculum development and Saturday morning PACE sessions were continued throughout the 1984-85 and 1985-86 academic years. Between 40 and 50 children participated each year in the Saturday PACE program held at the community counseling center (Lockett, 1986).

During the fourth year of PACE, a grant was awarded from a community foundation in cooperation with the local public school district to expand the PACE program to

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include six after-school sites. The expanded program became entitled the Community Based Education Program for Minority Student Achievement. The award was granted for a 3-year period with operation of five learning sites commencing in October 1986.

Five early elementary learning sites began programming in October 1986, and a later elementary learning site began operation in January 1987. The program meets twice a week for a 2-hour period. The session is begun with a snack followed by the PACE relaxation/affirmation training exercises. Each of the early elementary sites follow the same format of scheduled activities and behaviors. The curriculum planned for the elementary support program is designed to be concurrent with the public schools' grade level objectives in reading and mathematics. A manipulative approach to mathematics and a literary approach to reading are emphasized.

Development of the PACE Relaxation Training

The effectiveness of the Community Based Education Program in its entirety will be assessed in other research studies and evaluative reports. It is the purpose of this study to specifically investigate the efficacy of the PACE relaxation method.

The PACE relaxation training grew out of psychoeducational methodology known as Positive Attitude Training.
Developed by Tauraso (1981), Positive Attitude Training has as its overall goal "to teach individuals to develop their innate abilities to reach full potential, that is, to awaken their genius" (p. 5). It is the premise of the system that belief creates reality. This concept is exemplified by children who through believing and seeing themselves as winners, behave as winners; as opposed to others who believing and seeing themselves as losers, behave as losers. The components of Positive Attitude Training include relaxation, affirmation, exercise, and nutrition. Incorporating the research on suggestopedia and integrative brain functioning, the approach combines relaxation with breathing exercises, baroque classical music, positive affirmations, and guided imagery or visualization exercises.

Programming Aimed at Children's Excellence adapted, over the years, the PAT relaxation training to include the particular music, affirmations, and visualization exercises best suited for the population being served in the program. A specific description of the PACE relaxation technique being tested in this study follows in Chapter III.

Research Hypotheses

It was hypothesized that a change in affective behavior would result. It was anticipated that early
elementary minority students participating in a community based education program's PACE relaxation training would differ in mean change in affective behavior as measured by: (a) the school classroom teacher administration of the Behavior Rating Index for Children (BRIC), (b) the program site teacher administration of the BRIC, and (c) the frequency of school discipline referrals and suspensions (Richter, 1984; Zipkin, 1985). Specific hypotheses follow:

Hypothesis 1: Early elementary minority students participating in a community based education program's regular PACE relaxation training differed in mean change in affective behavior from students participating in intensive PACE training as measured by: (a) the school classroom teacher administration of the BRIC, (b) the program site teacher administration of the BRIC, and (c) the frequency of discipline referrals and suspensions (Borkovec & Sides, 1979; Calsyn et al., 1984; Richter, 1984).

Hypothesis 2: Early elementary female minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from male students participating in PACE training as measured by: (a) the school classroom teacher administration of the BRIC, (b) the program site teacher administration of the BRIC, and (c) the frequency
of discipline referrals and suspensions (Calsyn et al., 1984).

**Hypothesis 3:** Early elementary first grade minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from second and third grade students as measured by: (a) the school classroom teacher administration of the BRIC, (b) the program site teacher administration of the BRIC, and (c) the frequency of discipline referrals and suspensions (Richter, 1984).

**Hypothesis 4:** There was a relationship between the frequency of attendance of early elementary minority students participating in a community based education program's PACE relaxation training and the mean change in affective behavior as measured by: (a) the school classroom teacher administration of the BRIC, (b) the program site teacher administration of the BRIC, and (c) the frequency of discipline referrals and suspensions (Borkovec & Sides, 1979; Calsyn et al., 1984; Richter, 1984).
CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

This chapter contains the design of the study, a description of the PACE relaxation technique, and the procedures used to conduct the study. Specific subtopics include the research sample, a description of the PACE training, instrumentation, and design and procedure.

The Research Population

The population selected to participate in this study represent first through third grade Black children who were referred by school personnel or parents to an after-school program for additional support in reading, mathematics, and the enhancement of self-esteem. At the beginning of the Fall 1986 school year, building principals from 18 elementary schools in a metropolitan southwestern Michigan school district provided lists of potential participants most needing the services of the Community Based Education Program for Minority Student Achievement (CBEP/MSA). Because more than 700 K-6 students were referred, a decision was made to initiate the program with students in Grades 1-3 only. Final selection was made by the CBEP/MSA program director who accepted a proportionate number of
students per grade level from each of the 13 elementary buildings with first through third graders.

A total of 110 referrals were initially selected to begin the program. Parents were contacted by telephone when possible, and parental permission letters were sent home from the schools with participants returning the signed permission forms. The Community Based Education Program was in effect from October 1986 to May 1987. During that time, 150 students obtained initial written parental permission to participate in the program. As part of the enrollment procedure, parents or guardians were required to sign a consent waiver form which authorized testing and evaluation to occur (see Appendix). The consent waiver forms were signed by parents of the 120 students who decided to remain in the program.

PACE Relaxation Training

PACE relaxation training consists of a 10-minute session which includes the playing of a prepared recorded tape with 60 beat per minute baroque classical music and the voice of the PACE originator leading participants through breathing exercises and the introduction of an "affirmation." An affirmation is defined by LaMascus (1985) as "a positive statement of a personal goal" (p. 3). Affirmations describe the ideal way to act or feel and are always stated in the first person singular
(i.e., "I make good decisions"). Moorman and Dishon (1983) offered a similar definition: "An affirmation is a positive thought you have purposely chosen to plant in your mind to produce a result you desire" (p. 120).

Baroque classical music with 60 beat per minute tempo has been found particularly helpful in achieving a state of relaxation (Ostrander & Schroeder, 1979). That is the reason for its incorporation into the PACE relaxation training.

As the music continues during the final minutes of the tape, the teacher/adult present with the children in the group reads a short visual imagery providing a practical illustration of the affirmation.

The environment is prepared for each session with a circle of chairs centered in the room used for the training and lights dimmed to provide a conducive atmosphere for relaxation. Baroque classical music plays softly as participants enter the room and are instructed to quietly find a place in the circle. Children place their feet flat on the floor, place hands in their laps, and close their eyes as the tape begins.

The PACE training was developed over a 4-year period, with a series of tapes produced by the researcher and the author of the PACE materials in September 1986. The taped material was pilot tested three times with five separate groups of first through sixth graders. The 15 sessions
were conducted as part of a PACE program operating in a rural desegregated school district in southwestern Michigan.

Instrumentation

The Behavior Rating Index for Children was selected as the instrument most appropriate for use with the particular population being studied. The BRIC was selected over other behavior rating scales because it has been designed as "a brief, accurate instrument that is appropriate for evaluating children of widely differing ages, that is available in comparable form for multiple informants, and that applies to group and classroom settings" (Stiffman, Orme, Evans, Feldman, & Keeney, 1984, p. 84).

A review of the available literature and careful examination of several behavior rating scales revealed no instrument that met all the above criteria. Most behavior rating scales for children require at least 15-30 minutes to complete per child. Stiffman et al. (1984) pointed out:

Although this length is short for detailed behavior profiles, it is unwieldy for frequent test-retest evaluations, is highly intrusive in treatment situations, and is time consuming for evaluations of groups or classes of children (a particularly critical issue for school and community evaluations). (p. 84)

The BRIC is a 13-item rating scale, termed by Stevens (1968) a summated category partition scale, with three
randomly placed items (Items 1, 6, and 10) indicating a behavioral strength of the respondent. Although these items are not calculated in the behavior problem score with the 10 problem-oriented items, they are embedded in the BRIC so that the respondents are not presented solely with a list of "undesirable" behaviors and to "discern evidence of extreme responses on the part of respondents" (Stiffman et al., 1984, p. 84). The range of possible scores for each child is between 10 and 50 on the BRIC.

The authors further elaborated why the particular behavior problems were selected for inclusion:

The behavior problems that were selected for inclusion in the BRIC represent behavioral dimensions or factors that appear repeatedly in established behavioral inventories (Achenbach, 1978-1979; Achenbach & Edelbrock, 1978) in the DSM-III Classification System for Children (American Psychiatric Association, 1980), and in other instruments, regardless of age and sex. The BRIC, however, was designed simply to measure the degree of problem behavior. (Stiffman et al., 1984, p. 84)

The reliability and validity of the BRIC were evaluated through its use with a group of over 600 children who participated in a field experiment known as the Group Activities for Individual Needs (GAIN) Program in St. Louis, Missouri. The authors of the BRIC described the reliability and validity of the instrument as follows:

Internal consistency reliability of the BRIC was examined through coefficient alpha as defined by Cronbach (1951), a measure based on all of the interitem
correlations within an instrument. Coefficient alpha was computed separately for each group of respondents which included parents or guardians of the participants (n = 183), teachers (n = 198), group leaders (n = 28), and non-participant observers (n = 13). Alpha was .81 for parents, .81 for group leaders, .80 for observers, and .86 for teachers.

Because repeated-measures reliability is frequently considered critical to any program that attempts to measure change over time (Kerlinger, 1973), parents, group leaders, and observers completed the BRIC on a test-retest basis. Test-retest reliability for BRICs completed by group leaders (n = 11) was .89 (p < .001). As a more stringent measure of repeated-measures reliability controlling for directional drift (Bartko, 1976), the intraclass correlation coefficient was also calculated. The intraclass correlation coefficient for group leaders was also .89. Test-retest reliabilities for BRICs completed by observers (n = 6) was .84, and the intraclass correlation coefficient was .85 (p < .0001). When completed as a posttest, the intraclass correlation coefficients and Pearson rs reached .92 for group leaders and .89 for observers. Test-retest reliability for BRICs completed by parents (n = 24) was .72 (p < .0001). The intraclass correlation coefficient was .71. This was considered adequate for this short instrument when compared to the
test-retest reliability of the much longer Child Behavior Checklist (CBC) which ranged from .82 to .90 (Achenbach, 1978-1979).

Interrater reliabilities between BRICs completed by nonparticipant observers and group leaders was only .51 ($p < .001, n = 84$). Such interrater reliability seemed adequate considering the brevity of the instrument and in comparison with other instruments. The CBC yielded an interparent correlation ranging from .54 to .74 (Achenbach, 1978-1979).

Concurrent validity, or the degree of correspondence between a given measure and external criteria (Cronbach, 1971), was measured in the original validation of the Behavior Rating Index for Children. The phi correlation between participating children's scores on the BRIC, as reported by parents, and children's treatment status, as reported by parents, was .65 ($p < .001$).

Construct validity was assessed through the relationship between the parents' report of the children's behavior on the BRIC and the parents' report of this behavior on the Child Behavior Checklist. High positive correlations of the BRIC scores from parents with the CBC behavior problem scores ($r = .76, p < .001$) were obtained. Because a small number of test items tends to attenuate reliability, the correlation was believed to be strong.
A panel of seven experts, elementary school educators familiar with the PACE program, was selected to assess the content validity of the BRIC. The panel was asked to rate each item on the index as to the extent to which the item would measure a change in student behavior because of the child's participation in the PACE component of the community based education program. The experts were asked to rate their judgment of each item as strongly disagree, disagree, neutral, agree, or strongly agree. With the exception of the particular Items 11 and 12, the panel was unanimous in its judgment that each of the items measured a type of behavior that would be either enhanced or diminished by practicing the relaxation training.

**Design and Procedure**

This study was designed to gain insights and answer research questions with respect to psychoeducational theory based PACE relaxation training as it is used to influence change in affective behavior. The study design was quasi-experimental. A Nonequivalent Control Group Design (Campbell & Stanley, 1966, pp. 47-50) was used for the investigation.

The first independent variable included in the study is the intensity of relaxation training. Gender and age of the subjects are additional independent variables examined.
The dependent variables included in the study are the scores on the behavior rating scale, the BRIC, as administered to classroom teachers and community based education program site teachers, and frequency of occurrence of school discipline referrals and suspensions for each of the subjects.

Two types of treatment conditions exist in the study. The first condition is that in which the subjects received the PACE training only in after-school sessions of the community based education program (regular treatment, $n = 62$). This occurred over a 21-week period with 40 possible sessions. The second condition is that in which the subjects received the PACE training in the after-school CBEP/MSA sessions as well as in sessions held in their elementary schools (intensive treatment, $n = 58$). This occurred over a period of 21 weeks with 12 weeks of concurrent practice in school for a total of 60 possible sessions.

The regular PACE training was conducted in each after-school session in each of the five early elementary program sites. After students arrived from their elementary buildings and were served a snack at their respective sites, the children went immediately to a seat in the circle of chairs to begin the PACE training. This was followed by academic reinforcement of grade level objectives in reading and mathematics. Initially, all CBEP/MSA
participants received the regular training with twice weekly after-school sessions. After the first month of the CBEP/MSA after-school operation, the three elementary school principals with the largest number of students in the program were invited to provide the in-school intensive PACE training. The principals agreed to participation and the aforedescribed procedure was implemented twice a week during the first 10 minutes of the school day. The training was offered to CBEP/MSA participants attending one of the designated schools, and the training was conducted in the media centers of two of the buildings and the lunchroom of the third. The in-school sessions were facilitated by the principal in one of the buildings, the home/school interventionist and community based program facilitator in the second school, and the assistant principal in the third building.

The Behavior Rating Index for Children was completed by the classroom teachers and community based education program site teachers. The first completion of the rating scale occurred within 2-3 weeks of initial enrollment of subjects in the program between October 1986 and January 1987. Treatment occurred during the weeks, October 13, 1986, to March 27, 1987. Intensive in-school training occurred during the weeks January 5, 1987 to March 27, 1987. Posttest administration of the classroom teacher and site teacher rating scales were completed during the
weeks, April 6 to April 17, 1987. Data on the frequency of school discipline referrals of subjects were also collected during the weeks of April 6 to April 17, 1987.

Pretest BRIC data were collected on 120 of the subjects from school classroom teachers and 120 from program site teachers. Posttest BRIC data were collected on 119 of the subjects from school classroom teachers and 120 from program site teachers. Extensive follow-up occurred to assure complete collection of the data. Only one classroom teacher declined to provide a posttest rating.

Discipline referral and suspension data were collected on all 150 students who received initial parental permission to participate in the program. The 120 for whom consent waivers were obtained are included in the analyses pertaining to frequency of PACE training attendance and frequency of discipline referrals. Of the 120 subjects participating in the study, 82 were continuing in regular attendance in the after-school program at the time the posttest measures were completed. Of these, 41 received the regular PACE training and 41 received the intensive PACE training. The results of Hypotheses 1-3 are based upon this number of subjects with a breakdown of numbers indicated in Table 1.

The frequency distribution of attendance for regular and intensive groups is reported in Table 2.
### Table 1

Numbers of Subjects by Treatment Type, Gender, and Grade Level  
(N = 82)

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th></th>
<th>Males</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>4</td>
<td>7</td>
<td>11</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Grade 2</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Grade 3</td>
<td>9</td>
<td>8</td>
<td>17</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>19</td>
<td>37</td>
<td>23</td>
<td>22</td>
</tr>
</tbody>
</table>

The results of Hypothesis 4 are based upon the inclusion of all 120 program participants with a breakdown of numbers indicated in Table 3. Of this number, 77 were included in the regular PACE training and 43 in the intensive training.

The frequency distribution of attendance for regular and intensive groups is reported in Table 4.

### Analyses

In Hypotheses 1-4, the mean change in affective behavior was calculated for each item on the BRIC with summative means computed for negative or disruptive behavior items. The change was computed for the items on the BRIC as administered to school classroom teachers and
Table 2

Frequency Distribution of Attendance for Regular and Intensive Groups 
(N = 82)

<table>
<thead>
<tr>
<th>Number of sessions</th>
<th>Regular (n = 41)</th>
<th>Intensive (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6-10</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>11-15</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>16-20</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>21-25</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>26-30</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>31-35</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>36-40</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>41-45</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>46-50</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>51-55</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>56-60</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

program site teachers and for the mean frequency of school discipline referrals and suspensions. Means were calculated to report differences for all subjects in the study (n = 120); for all subjects who continued enrollment in the program through March 1987 (n = 82), for type of training (regular or intensive), for gender (girls or boys), and for grade level (Grades 1, 2, and 3). In
Hypothesis 4, the correlation between the mean change score and frequency of attendance were calculated.

Table 3
Numbers of Subjects by Treatment Type, Gender, and Grade Level
\( (N = 120) \)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Females</th>
<th></th>
<th>Males</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Grade 2</td>
<td>14</td>
<td>4</td>
<td>18</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Grade 3</td>
<td>14</td>
<td>8</td>
<td>22</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>19</td>
<td>52</td>
<td>44</td>
<td>24</td>
</tr>
</tbody>
</table>

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Table 4

Frequency Distribution of Attendance for Regular and Intensive Groups
(N = 120)

<table>
<thead>
<tr>
<th>Number of sessions</th>
<th>Regular (n = 77)</th>
<th>Intensive (n = 43)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>6-10</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>11-15</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>16-20</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>21-25</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>26-30</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>31-35</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>36-40</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>41-45</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>46-50</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>51-55</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>56-60</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
CHAPTER IV

PRESENTATION OF DATA

Introduction

The results of the analyses of Hypotheses 1-4 are presented in this chapter. Hypotheses 1a-1c and 2a-2c were tested using a $t$ test for independent means. Hypotheses 3a-3c were tested using a one-way analysis of variance (ANOVA). Hypothesis 4 was tested using the Pearson $r$ correlation. The level of significance was set at .05 for all tests.

Change in affective behavior was measured separately by both the school classroom teachers and the program site teachers. The instrument used was the Behavior Rating Index for Children (BRIC). The BRIC is scored by adding the ratings on selected items representing disruptive or undesirable school and classroom behaviors. Change in BRIC scores from pretest to posttest was calculated for each student, and mean change was compared using the $t$ test for dependent means (SPSS Inc., 1986).

Hypothesized Findings

The results from testing of Hypotheses 1-3 using a $t$ test and ANOVA and of Hypothesis 4 using a Pearson $r$ are
presented in the section which follows.

Hypothesis 1a

Early elementary minority students participating in a community based education program's regular PACE relaxation training differed in mean change in affective behavior from students participating in intensive PACE training as measured by the school classroom teacher administration of the BRIC. Based on the t test for independent means presented in Table 5, the probability that mean change represents two distinctive populations was not low enough to reject at the .05 level of significance. A negative mean score indicates a reduction of disruptive behavior.

Table 5

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>41</td>
<td>1.610</td>
<td>5.999</td>
<td>1.67</td>
<td>.100</td>
</tr>
<tr>
<td>Intensive</td>
<td>41</td>
<td>-0.512</td>
<td>5.523</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 1b

Early elementary minority students participating in a community based education program's regular PACE
relaxation training differed in mean change in affective behavior from students participating in intensive PACE training as measured by the program site teacher administration of the BRIC. Based on the t test for independent means presented in Table 6, the probability that mean change represents two distinctive populations was not low enough to reject at the .05 level of significance. A negative mean score indicates a reduction of disruptive behavior.

Table 6

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>41</td>
<td>-8.634</td>
<td>5.602</td>
<td>-1.08</td>
<td>.284</td>
</tr>
<tr>
<td>Intensive</td>
<td>41</td>
<td>-7.195</td>
<td>6.455</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 1c

Early elementary minority students participating in a community based education program's regular PACE relaxation training differed in affective behavior from students participating in intensive PACE training as measured by the mean frequency of discipline referrals and suspensions. Based on the t test for independent means
presented in Table 7, the probability that regular and intensive mean frequencies of discipline referrals and suspensions represent two distinctive populations was not low enough to reject at the .05 level of significance for either discipline referrals or suspensions.

Table 7
Mean Frequency of Discipline Referrals and Suspensions by Treatment Type

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline referrals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>41</td>
<td>2.122</td>
<td>3.092</td>
<td>-0.08</td>
<td>.938</td>
</tr>
<tr>
<td>Intensive</td>
<td>41</td>
<td>2.195</td>
<td>5.202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>41</td>
<td>0.244</td>
<td>0.663</td>
<td>-0.45</td>
<td>.650</td>
</tr>
<tr>
<td>Intensive</td>
<td>41</td>
<td>0.317</td>
<td>0.789</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Statistics regarding the average number of discipline referrals and suspensions for Black first-third grade students were unavailable from school officials. An examination of the frequency of referrals and suspensions of the students participating in this study indicated that for a number of students, the incidence of referrals and suspensions decreased in proportion to the frequency of attendance in the PACE relaxation training.
Hypothesis 2a

Early elementary female minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from male students participating in PACE training as measured by the school classroom teacher administration of the BRIC. Based on the t test for independent means presented in Table 8, the probability that mean change represents two distinctive populations was not low enough to reject at the .05 level of significance.

Table 8
Gender Pre-Post BRIC Mean Change Score Data and t Values for School Classroom Teacher Administration

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>37</td>
<td>0.595</td>
<td>6.103</td>
<td>-0.06</td>
<td>.949</td>
</tr>
<tr>
<td>Males</td>
<td>45</td>
<td>0.511</td>
<td>5.663</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 2b

Early elementary female minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from male students participating in PACE training as measured by the program site teacher administration of the
BRIC. Based on the \( t \) test for independent means presented in Table 9, the probability that mean change represents two distinctive populations was not low enough to reject at the .05 level of significance. A negative mean score indicates a reduction of disruptive behavior.

Table 9

Gender Pre-Post BRIC Mean Change Score Data and \( t \) Values for Program Site
Teacher Administration

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>( t ) value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>37</td>
<td>-7.649</td>
<td>4.809</td>
<td>-0.36</td>
<td>.720</td>
</tr>
<tr>
<td>Males</td>
<td>45</td>
<td>-8.133</td>
<td>6.953</td>
<td>.36</td>
<td>.720</td>
</tr>
</tbody>
</table>

Hypothesis 2c

Early elementary female minority students participating in a community based education program's PACE relaxation training differed in affective behavior from male students participating in PACE training as measured by the frequency of discipline referrals and suspensions. Based on the \( t \) test for independent means presented in Table 10, the probability that mean frequencies of discipline referrals and suspensions represent two distinctive populations was low enough to reject at the .05 level of significance.
for discipline referrals but not low enough for suspensions.

Table 10

Mean Frequency of Discipline Referrals and Suspensions by Gender Type

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t value</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline referrals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>37</td>
<td>1.135</td>
<td>1.766</td>
<td>2.01</td>
<td>.047</td>
</tr>
<tr>
<td>Males</td>
<td>45</td>
<td>3.000</td>
<td>5.398</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>37</td>
<td>0.162</td>
<td>0.442</td>
<td>1.35</td>
<td>.182</td>
</tr>
<tr>
<td>Males</td>
<td>45</td>
<td>0.378</td>
<td>0.886</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 3a

Early elementary first grade minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from second and third grade students as measured by the school classroom teacher administration of the BRIC. Based on the one-way ANOVA summarized in Table 11, the probability that mean change represents three distinctive populations was not low enough to reject at the .05 level of significance.
Table 11

Grade Level Summary One-Way ANOVA Using Mean t Scores for School Classroom Teacher Administered BRIC

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F ratio</th>
<th>F prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>23.964</td>
<td>11.982</td>
<td>.347</td>
<td>.708</td>
</tr>
<tr>
<td>Within</td>
<td>79</td>
<td>2728.341</td>
<td>34.536</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>2752.305</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 3b

Early elementary first grade minority students participating in a community based education program's PACE relaxation training differed in mean change in affective behavior from second and third grade students as measured by the program site teacher administration of the BRIC. Based on the one-way ANOVA summarized in Table 12, the probability that mean change represents three distinctive populations was not low enough to reject at the .05 level of significance.

Hypothesis 3c

Early elementary first grade minority students participating in a community based education program's PACE relaxation training differed in affective behavior from
Table 12
Grade Level Summary One-Way ANOVA Using Mean t Scores for Program Site Teacher Administered BRIC

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>$F$ ratio</th>
<th>$F$ prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>19.128</td>
<td>9.564</td>
<td>.257</td>
<td>.774</td>
</tr>
<tr>
<td>Within</td>
<td>79</td>
<td>2945.275</td>
<td>37.282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>2964.402</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

second and third grade students as measured by the frequency of discipline referrals and suspensions. Based on the one-way ANOVA summarized in Table 13, the probability that mean frequencies of discipline referrals and suspensions represent three distinctive populations was not low enough to reject at the .05 level of significance for either discipline referrals or suspensions.

Hypothesis 4a

There was a relationship between the frequency of attendance of early elementary minority students participating in a community based education program's PACE relaxation training and the mean change in affective behavior as measured by the school classroom teacher administration of the BRIC. Correlation between frequency of
Table 13

Mean Frequency of Discipline Referrals and Suspensions by Grade Level

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F ratio</th>
<th>F prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Discipline referrals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>2</td>
<td>0.855</td>
<td>0.427</td>
<td>.023</td>
<td>.977</td>
</tr>
<tr>
<td>Within</td>
<td>79</td>
<td>1464.085</td>
<td>18.533</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>1464.939</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Suspensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>2</td>
<td>0.135</td>
<td>0.067</td>
<td>.125</td>
<td>.882</td>
</tr>
<tr>
<td>Within</td>
<td>79</td>
<td>42.414</td>
<td>0.537</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>42.549</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attendance and mean change of the school classroom teacher administered BRIC was \(-0.0524\) with \(p = .286\).

**Hypothesis 4b**

There was a relationship between the frequency of attendance of early elementary minority students participating in a community based education program's PACE relaxation training and the mean change in affective behavior as measured by the program site teacher administration of the BRIC. Correlation between frequency of attendance
and mean change of the program site teacher administered BRIC was $-0.5262$ with $p = .000$. The negative correlation means that more frequent program attendance is associated with lower incidence of disruptive behavior as measured on the BRIC.

**Hypothesis 4c**

There was a relationship between the frequency of attendance of early elementary minority students participating in a community based education program's PACE relaxation training and affective behavior as measured by the frequency of discipline referrals and suspensions. Correlation between frequency of attendance and frequency of discipline referrals was $-0.0700$ with $p = .224$. Correlation between frequency of attendance and frequency of suspensions was $-0.1975$ with $p = .015$. 

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CHAPTER V

DISCUSSION AND CONCLUSIONS

This chapter contains a summary of Chapters I through IV, interpretation of and conclusions drawn from the findings presented in Chapter IV, and implications for future research.

Summary

Outlined in Chapters I, II, and III was background information regarding the PACE relaxation training used in a community based education program for minority student achievement in a southwestern Michigan city. Rationale was provided to support the use of this particular intervention with early elementary Black students. Literature (Richter, 1984; Zipkin, 1985) assessing the effectiveness of a variety of forms of relaxation training with various cognitive and affective behaviors indicated promising results with children in educational settings.

Related literature supported hypotheses that intensity of treatment, gender of subjects, and age or grade level of subjects may lead to differences in the efficacy of relaxation training (Borkovec & Sides, 1979; Calsyn et al., 1984; Richter, 1984).
The purpose of this quasi-experimental study was to investigate the change in affective behavior of early elementary minority students participating in a community based education program's PACE relaxation training. It was hypothesized that there would be a difference in affective behavior between groups receiving regular or intensive training, groups of females and males, and groups of first, second, and third graders. It was also hypothesized that a relationship would exist between frequency of attendance in PACE relaxation training sessions and change or frequency of affective behavior.

Mean change or frequency of affective behavior was measured by the pretest and posttest school classroom and program site teacher administration of the Behavior Rating Index for Children (BRIC) and frequency of school discipline referrals and suspensions.

The major research questions were:

1. Did the PACE relaxation training, that is, regular or intensive training, lead to differences in the measured affective behavior of early elementary minority students enrolled in a community based education program?

2. Did the gender of subjects, that is, females or males, participating in the PACE relaxation training lead to differences in the measured affective behavior of early elementary minority students enrolled in a community based education program?
3. Did the grade level of subjects, that is, Grades 1, 2, or 3, participating in the PACE relaxation training lead to differences in the measured affective behavior of early elementary minority students enrolled in a community based education program?

4. Did a relationship exist between the frequency of attendance of early elementary minority students participating in PACE relaxation training and their measured affective behavior?

The t test of independent means, the one-way ANOVA, and the Pearson r correlation were used to test hypotheses at the .05 level of significance.

Results of the hypotheses testing indicated that there were no statistically significant differences in measured change between regular training and intensive relaxation training. No statistically significant differences were indicated in measured change between males and females on the school teacher administered BRIC, the program site teacher administered BRIC, or the mean frequency of suspensions. However, a statistically significant difference between males and females was indicated for the mean frequency of discipline referrals. No statistically significant differences were indicated between grade levels. A statistically significant relationship was indicated between frequency of attendance and mean change of the program site teacher administered BRIC, but no
A statistically significant relationship was indicated between frequency of attendance and mean change of school classroom teacher administered BRIC or mean frequency of discipline referrals.

Interpretations and Conclusions

A total of 12 operational hypotheses were tested. Hypotheses 1a-1c and 2a-2c were tested using a two-tailed t test, Hypotheses 3a-3c were tested using a one-way ANOVA, and Hypotheses 4a-4c were tested using a Pearson r correlation. The .05 level of significance was used for all statistical tests. The probability that mean change or differences represented distinctive populations was not low enough to reject at the .05 level of significance except in Hypotheses 2c and 4b, cited above and described in the following sections.

Although statistically significant results were not found in all of the cases where they were expected, it is important to note that a reduction in disruptive behavior of the early elementary minority students studied did occur between pretest and posttest administration of the Behavior Rating Index for Children. That there were not statistically significant differences between treatment groups, boys and girls, and grade levels does not provide conclusions regarding the effectiveness of the treatment itself. As further discussed in the implications section,
future field studies are needed to further test the methodology and extend the basic research initiated by this study.

Conclusions Related to the First Research Question

Hypotheses 1a-1c were tested to determine whether the group exposed to regular PACE relaxation training differed in change or frequency of affective behavior from the group exposed to intensive PACE relaxation training. Mean change scores for the school classroom teacher and program site teacher administered BRICs and mean frequency of school discipline referrals and suspensions were used in this analysis.

The conclusion drawn for the first research question was that there were no differences between the effectiveness of regular and intensive PACE relaxation training treatment types.

Conclusions Related to the Second Research Question

Hypotheses 2a-2c were tested to determine whether males or females participating in PACE relaxation training differed in change or frequency of affective behavior. Mean change scores for the school classroom teacher and program site teacher administered BRICs and mean frequency of school discipline referrals and suspensions were used in this analysis.
The conclusions drawn for the second research question were that (a) there were no differences in the measured change scores between males and females or the mean frequency of suspensions between males and females, and (b) the males exhibited a greater mean frequency of discipline referrals than did the females.

Conclusions Related to the Third Research Question

Hypotheses 3a-3c were tested to determine whether Grades 1, 2, and 3 subjects participating in PACE relaxation training differed in change or frequency of affective behavior. Mean change scores for the school classroom teacher and program site teacher administered BRICs and mean frequency of school discipline referrals and suspensions were used in this analysis.

The conclusion drawn for the third research question was that there were no differences in the measured change or frequency of affective behavior between subjects enrolled in Grades 1, 2, and 3.

Conclusions Related to the Fourth Research Question

Hypotheses 4a-4c were tested to determine if a relationship existed between the frequency of attendance in PACE relaxation training sessions and the change or frequency of affective behavior. Mean change scores for the school classroom teacher and program site teacher
administered BRICs and mean frequency of school discipline referrals and suspensions were used in this analysis.

The conclusions drawn were that (a) no relationship existed between frequency of attendance and school classroom teacher measured behavior change, between the frequency of attendance and frequency of discipline referrals, and (b) a relationship did exist between frequency of attendance and program site teacher measured behavior change.

Conclusions From Hypothesized Findings

The conclusions drawn from the hypothesized findings were that the regular PACE relaxation training did not differ from the intensive PACE relaxation training in measured change or frequency of affective behavior. Males did not differ from females in measured change or frequency of affective behavior except as measured by the frequency of discipline referrals. First, second, and third grade students did not differ from each other in measured change or frequency of affective behavior. A relationship existed between the frequency of attendance in PACE relaxation sessions and affective behavior change as measured by program site teachers, but no relationship existed between the frequency of attendance and the other measured change or frequency of affective behavior.
That no statistically significant differences were found when they were expected may be the result of a number of factors. The inability of the study to control for a number of variables is undoubtedly one of the chief factors related to statistically significant differences. The use of instruments which were not specifically designed to measure affective behaviors being influenced by the PACE relaxation training is another possible reason the anticipated differences did not result.

Anecdotal reports and school and program site teacher verbal and written reviews have indicated strong support for the continued use of the PACE relaxation training with the community based education program participants.

Of particular interest is the examination of differences between the three school buildings in which the intensive training was conducted. While the overall cooperative nature of the school district encouraged the intervention to take place, the degree of enthusiasm and support within each of the buildings varied and led to differing outcomes. School climate and student learning climate discussed in Chapters I and II are factors to be noted when assessing the degree of support for the intervention in each of the three schools as well as the support for the training in general on the part of each of the other elementary buildings with students participating in the community based education program.
In general, where the level of morale, trust, and support of the training were high, the greater the differences between pretest and posttest measures on the classroom teacher administered BRICs. That the statistical difference between regular and intensive groups was not greater is probably related to this factor as well as to the fact that a number of students assigned to intensive training actually attended fewer sessions than those assigned to regular training.

This study, in part, provided support for Calsyn's et al. (1984) findings that males differ from females in affective school and classroom behavior, and for Borkovec and Sides's (1979) findings that a relationship exists between the frequency of attendance in an intervention program and the effectiveness of the particular methodology.

Implications for Further Research

A review of literature has provided support for the use of various forms of relaxation training with a variety of cognitive and affective behaviors in early elementary school and educational settings. This study was the first of its kind to examine the effectiveness of a particular form of training known as PACE relaxation training. As such, the study simply laid some of the groundwork for subsequent research in the efficacy of this specific
methodology. The need for greater experimental control was evidenced in the challenges to external and internal validity inherent in a quasi-experimental design.

A need exists for more field studies to test out the theories incorporated into the PACE relaxation training and to extend the basic research beyond the initial effort of this study. Because the methodology is innovative and unfamiliar to some teachers trained in traditional teaching and learning techniques, it is important for additional orientation to be included for those with students participating in the PACE training.

The PACE training supports the philosophy that a variety of techniques are needed to meet the challenges of varied learning styles arising from the rapidly changing public school population described in Chapter I. As the PACE relaxation training is further developed, it continues to place emphasis on the unique learning styles of the particular cultural group for whom the methodology was designed as well as advocate usage for all school children.

It is recommended that the effectiveness of the intervention strategy be tested experimentally in both the school and community based education after-school program settings with subjects randomly assigned to treatment conditions including the PACE relaxation training procedure, another type of relaxation training or pseudo form.
of training, and no training. Because PACE relaxation training continues in its development as an effective psychoeducational procedure and because the treatment period of this study occurred during the first year of expanded community based education program operation, it was not possible to design an experimental study with more rigid controls. Subsequent studies are likely to reveal further evidence to support the use of the PACE relaxation training over other procedures or with certain populations of children.

Another consideration for future research is that of instrument selection. It was recognized that the measures selected for this study were the most adequate available. However, the need exists for a valid and reliable instrument that specifically measures the affective behaviors which the PACE relaxation training purports to influence. An instrument utilizing direct classroom observation would perhaps be useful.

An implication for educators using the PACE relaxation training that might be drawn from this study is that frequency of attendance in training sessions is moderately related to change in affective behavior as measured by the educators most actively involved in the intervention program. The encouragement of continued parental, program, and school cooperation to promote regular attendance might lead to greater methodological effectiveness. As the need
increases for innovative means to reduce disruptive behavior in schools and meet the challenge of growing diversity among students, the PACE relaxation training holds promise as a technique for expanded utilization among a variety of school age populations.
COMMUNITY BASED EDUCATION PROGRAM
FOR MINORITY STUDENT ACHIEVEMENT
2323 Gull Road, Kalamazoo, MI 49001; Ph: 344-9411

CONSENT WAIVER

I, the undersigned parent or guardian of _____________________________________
do hereby grant authority to the Community Based Education Program for Minority Student
Achievement to render their best judgment concerning medical assistance or hospital care in
the event of an accident or illness in my absence. In the event of need, the physician who should
be contacted is: ___________________________ Phone: _____________________

PHOTOGRAPHY AND VIDEOTAPE AUTHORIZATION

I, the undersigned parent or guardian of the above named child do hereby authorize the
Community Based Education Program for Minority Student Achievement to use photographs
or videotape of the above named child and/or publish the same with a name for any purposes
of illustration, newspaper, or television media.

EXCLUSION CLAUSE

I, the undersigned parent or guardian in enrolling my child in the Community Based Education
Program for Minority Student Achievement understand that he/she in attending the program
and using the facilities of churches in the community does so at his/her own risk. The Community
Based Education program for Minority Student Achievement shall not be liable for any damage
arising from personal injuries sustained in or about the premises of the location of the program.
The undersigned also assumes full responsibility for all injuries and damages which may occur
in relation to the program including field trips in cars, walking trips, and in/out door activities.
In signing this clause the undersigned fully and forever release the program staff, and the church
from any and all claims.

PERMISSION FOR EVALUATION

I, the undersigned parent or guardian of the above named child do hereby authorize the
Community Based Education Program for Minority Student Achievement to administer tests
and evaluation of academic and affective progress of my child that will be given during the
course of the program in order to provide a better understanding of his/her needs and abilities.
I further give permission for the staff of the Community Based Education Program to visit or
converse with the school personnel: teacher, principal and support staff on the progress of my
child.

PARENT OR GUARDIAN SIGNATURE ___________ DATE ___________
NAME OF CHILD _______________ PHONE NUMBER __________
ADDRESS ___________________

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