Students with Emotional and Behavioral Disorders in Different Learning Environments:

Academic and Self-Concept Differences

Dissertation

Submitted to Northcentral University

Graduate Faculty of the School of Education
in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

by

TERRENCE RANIER CHISOLM

Prescott Valley, Arizona
December 2012
Copyright 2012

Terrence Ranier Chisolm
Students with Emotional and Behavioral Disorders in Different Learning Environments:

Academic and Self-Concept Differences

by

Terrence Ranier Chisolm

Approved by:

Chair: Dr. Donna C. Graham, Ph.D. Date

Member: Dr. Cathie Koss, Ph.D.

Member: Dr. Aaron R. Deris, Ph.D.

Certified by:

School Dean: Dr. Cindy K. Guillaume, Ed.D. Date
Abstract

Students with emotional and behavioral disorders (EBD) perform poorly both academically and behaviorally, and this performance tends not to improve over time. There is a need to understand the effect of learning environments on the academic achievement and self-concept of this population. In this quantitative, archival study, academic achievement and self-concept scores were compared for middle-school students with EBD based on whether the students had been placed into a self-contained learning environment (SCLE) or a mainstreamed least restrictive environment (MLRE). Archived scores for academic achievement and self-concept were evaluated for students in an urban school district in South Carolina with highly qualified special-education staff members. Academic achievement scores and self-concept scores for 2007 were compared between the two groups (n = 70 for each group), with 2005 scores used as a baseline. Composite academic achievement scores, as measured with the Measure of Academic Progress, were significantly higher in 2007 for MLRE students than for SCLE students, t(138) = 2.65, p = .009, although between-group differences were not significant at baseline. Academic scores improved from baseline to 2007 for the MLRE group, t(69) = 13.68, p < .001, and the SCLE group, t(69) = 8.16, p < .001. There were no significant between-group differences in self-concept scores for 2007. Self-concept scores, as measured with the Piers-Harris 2, improved from baseline to 2007 for the MLRE group, t(69) = 7.61, p < .001, and the SCLE group, t(69) = 7.53, p < .001. Split-plot analyses of variance showed no significant Year x Group interaction effects. The findings of the study demonstrated that when students with EBDs are given an opportunity with highly skilled professional staff members trained in both mental health
counseling and special education, improvements are possible. The findings enhanced the broken-glass theory by demonstrating the potential of integrating academic skills with emotional and behavioral support. Additional research is needed to investigate more intensive and innovative strategies designed to help students with EBDs succeed academically and socially. Curriculum-based measurements should be investigated for this population to enhance and integrate academic, emotional, and behavioral skills within the context of highly expert learning environments.
Acknowledgements

First and foremost God you are the greatest!!! I would like to thank my beautiful wife Teri for being so loving and understanding throughout this journey. We have experienced a lot during this time, but it is always a true blessing having you by my side as I complete personal and professional milestones. I love you so much! I would like to thank my late grandmother Juanita Plair. Your example of unselfish love and sacrifice continues to be an example of what God’s love is really about. Similarly, I would like to thank my mother, Sarah Chisolm, your sweet and peaceful spirit has always given me the strength to love. My father Allen Chisolm, your dedication and example of hard work is inspiring to watch and very tiring to imitate. Clementine Mitchell, your sense of family unity is breath taking. Jimmy Mitchell, your humbleness is a graceful work of art in action. As well, I offer sincere gratitude to my fellow Franciscan brothers and sisters. Rest assure, your prayers were felt and appreciated. Lisa Waters, your unending support and confidence in my professional abilities make coming to work fun and enjoyable. To Dr. Graham, your guidance and patience was a calming presence during the rough patches. Thank You!

A very special thank you goes to John and Peggy Fern. Your tireless commitment to a life together that embodied the spirit of a Living Prayer, helped me achieved this milestone, and I will forever be thankful to the both of you.
Dedication

This dissertation is dedicated to living life as a Living Prayer and especially having a wife that embodies the Love of God.

Living Prayer

The answer we are always searching for is in our souls. That’s why it is of the essence, that When You Realize Who GOD Is, You Realize Who You Are. Sometimes the words are spoken or unspoken, but those spoken or unspoken words are always in its widest sense, “our prayers, as an elevation of our souls to God- Saint John Damascene”. Thus, our life becomes a Living Prayer. The significance and responsibility of Living Prayer, is to bring spoken and unspoken words of Peace, Love, Forgiveness and Understanding here on this earth. Living Prayer, which encounters the Mystery, Love, Humility and Forgiveness of God through His Spirit, gives us an example of what to become. Our Living Prayer is a daily face to face interaction that is living and breathing, that brings God among us. For that reason, we are to come to know God and ourselves in God. We are all commissioned to Love.

I pray that we let the love of God, begin in our Spirits and continue with the birth of our Souls. My Lord and My God! It is in Your peace and in Your patience, Almighty Father, through Your Son, Our Lord and Savior Jesus Christ, leads us and guides us. “We Are a Resurrected People!!!.

"Pace e bene"

Terrence R. Chisolm, OFS
# Table of Contents

List of Tables .................................................................................................................. x

Chapter 1: Introduction ...................................................................................................... 1
  Background ....................................................................................................................... 3
  Problem Statement .......................................................................................................... 4
  Purpose ............................................................................................................................ 5
  Theoretical Framework ..................................................................................................... 6
  Research Questions ......................................................................................................... 9
  Hypotheses ..................................................................................................................... 10
  Nature of the Study ........................................................................................................... 10
  Significance of the Study ............................................................................................... 12
  Definitions ....................................................................................................................... 13
  Summary ........................................................................................................................ 17

Chapter 2: Literature Review .............................................................................................. 18
  Historical Changes in Special Education ......................................................................... 19
  Emotional and Behavioral Disorder (EBD) ..................................................................... 31
  Self-Concept ................................................................................................................... 52
  Educational Placement of EBD Students ........................................................................ 57
  Transition Goals and Career Planning ........................................................................... 59
  Summary ........................................................................................................................ 61

Chapter 3: Research Method ............................................................................................. 63
  Research Methods and Design ....................................................................................... 66
  Participants ...................................................................................................................... 67
  Materials/Instruments .................................................................................................... 68
  Operational Definition of Variables ............................................................................... 71
  Data Collection, Processing, and Analysis ...................................................................... 73
  Methodological Assumptions, Limitations, and Delimitations ....................................... 74
  Ethical Assurances .......................................................................................................... 77
  Summary ........................................................................................................................ 77

Chapter 4: Findings ............................................................................................................ 80
  Results .............................................................................................................................. 81
  Evaluation of Findings ................................................................................................. 88
  Summary ........................................................................................................................ 96

Chapter 5: Implications, Recommendations, and Conclusions ....................................... 98
  Implications ..................................................................................................................... 101
  Recommendations ......................................................................................................... 105
  Conclusions .................................................................................................................... 108

References ......................................................................................................................... 109

Appendixes ........................................................................................................................ 121
  Appendix A: Piers-Harris 2 Self-Concept Form ................................................................ 122
List of Tables

Table 1  Academic Test Scores, Between-Group Differences................................. 82
Table 2  Academic Test Scores, Within-Group Longitudinal Comparisons, Mainstream
          Least Restricted Environment........................................................................ 84
Table 3  Academic Test Scores, Within-Group Longitudinal Comparisons, Self-Contained
          Learning Environment ....................................................................................... 85
Table 4  Self-Concept Scores, Between-Group Differences ....................................... 87
Table 5  Self-Concept Test Scores, Within-Group Longitudinal Comparisons, Mainstream
          Least Restricted Environment ........................................................................... 88
Table 6  Self-Concept Test Scores, Within-Group Longitudinal Comparisons, Self-
          Contained Learning Environment ..................................................................... 89
Chapter 1: Introduction

An emotional and behavioral disorder (EBD) is marked by inappropriate, moody, or negative behaviors (Barbetta, Norona, & Bicard, 2006; Sciarra, 2011). Students with an EBD have high rates of problematic behaviors and course failures, lower academic scores, lower graduation rates, social dysfunction, psychological problems, and difficulty integrating into society (Mooney, Ryan, Uhing, Reid, & Epstein, 2006; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). Such students typically have difficulty functioning properly in a learning environment (Barbetta et al., 2006). Self-concept and social skills are likely to share both direct and indirect relationships with academic achievement outcomes (Bloom, Iwata, Fritz, Roscoe, & Carreau, 2011).

Most students with an EBD have shown steep declines in self-concept related to academic achievement, motivation, and teacher/student relationships, as well as an increase in psychological distress and antisocial behaviors (Cheney, Flower, & Templeton, 2008; Gage, & Lierheimer, 2012). Once negative self-perceptions are embedded in the thought processes of students with an EBD, those students tend to have lifelong struggles with multiple developmental, behavioral, and clinical problems (Van Eck, Evans, & Ulmer, 2007), including depression and learned helplessness (Gage, & Lierheimer, 2012; Tonkin & Watt, 2003). Adolescents with an EBD have more negative self-concepts regarding psychological, social, and academic changes compared to peers (Hagner, Malloy, Mazzone, & Cormier, 2008).

Students in South Carolina with an EBD may be placed in a self-contained learning environment (SCLE) or a mainstream least restrictive environment (MLRE). In a MLRE, a student with an EBD is educated in the core academic areas (language arts,
reading, and mathematics) with peers in the general education environment. In a MLRE, a student with a disability is assured to have the same access to the general education curriculum, extracurricular activities, and any other school functions that a nondisabled student has, to the greatest extent possible (Hallahan et al., 2011; Kern, Hilt-Panahon, & Sokol, 2009). A SCLE is a learning environment with fewer students, in which students with an EBD are educated in the core academic areas with other students with an EBD.

If the appropriate environment and interventions are in place for students with an EBD, academic and socioemotional outcomes improve (Cullinan, 2007). Previous research regarding learning environments for students with an EBD has focused mainly on comparisons with nondisabled peers (Katsiyannis, Smith, & Ryan, 2011; Kaufman, Hallahan, Astuto, & Lloyd, 2008). Previous researchers have not decisively determined which learning environment provides the best chance for success for students with an EBD (Katsiyannis et al., 2011; Lane, Barton-Arwood, Nelson, & Wehby, 2008; Sciarra, 2011). To evaluate the effectiveness of types of learning environments for this population, there was a need to compare students with an EBD alongside their disabled peers in different learning environments equipped to handle the erratic and negative behaviors of this population (Lane et al., 2008).

This chapter introduces a study designed to compare academic achievement and self-concept for two groups of students with an EBD, based on whether the students had been placed into a SCLE or a MLRE. This chapter begins with background information. The problem is then defined, followed by the purpose of the study, the theoretical framework, research questions, and hypotheses. The nature and significance of the study are discussed, followed by definitions of terms and a summary.
Background

Factors that contribute to an EBD include (a) biological disorders and diseases, (b) pathological family relationships, (c) undesirable experiences at school, and (d) negative cultural influences (Hallahan, Kauffman, & Pullen, 2011; National Center for Special Education Research, 2007; Robinson, 2007). An EBD directly affects the academic achievement and self-concept of students in ways unexplainable by intellectual, sensory, or health factors (Buckley, 2009). Issues that affect academic achievement and self-concept in the learning environment of students with EBD include learning problems, unfair educational placement, differences in diagnosis requirements, the presence of unqualified professionals, inadequate educational placement procedures, and behavioral limitations that are uncontrollable (Boreson, 2006; Collaborative for Academic, Social, and Emotional Learning 2007; Rutherford, Quinn, & Mathur, 2007).

Students with an EBD have poor academic and socioemotional outcomes (Farley, Torres, Wailehua, & Cook, 2012; Nelson, 2003). The potential economic and social cost of new policies, programs, and interventions to treat members of this population, with their difficulties functioning in school and society, continues to increase. In 2007, the annual quantifiable cost was an estimated $247 billion to treat mental, emotional, and behavioral disorders (O’Connell, Boat, Astuto, & Warner, 2009). In handling students with EBD, special educators require different instructional approaches and different forms of service delivery (Kauffman, 2003; Mayer, Lochman, & Acker, 2005). High rates of behavioral issues, low levels of self-concept, and low academic scores continue to affect members of a society not well prepared to cope with such erratic and negative behaviors (National Center for Special Education Research, 2007).
Students with an EBD present challenges in learning environments. More than 52% of students with an EBD have dropped out of high school during the first 2 years (National Center for Special Education Research, 2007; National Longitudinal Transition, 2007). Issues related to self-concept affect 92% of these students (National Longitudinal Transition, 2007), and academically these students have performed 1 to 3 years below grade level (Sciarra, 2011). Of all students with an EBD, 31% are in SCLEs rather than MLREs, in contrast to 19% for students from other disability categories. U.S. federal laws have ensured that any student with a disability in the public school system is entitled to be educated in the MLRE with nondisabled peers (Wright & Wright, 2007).

A SCLE is a small educational setting with relatively few students. SCLEs are created to foster and enhance support for students with special needs or specific difficulties (Ferrara, 2006). To enhance support, a SCLE is designed to provide a learning environment with fewer students and more resources to assist the student with special needs (Cullinan, 2007). A MLRE allows students with an EBD to be educated in the core academic areas (language arts, reading, and mathematics) with peers in the general education learning environment (Chisolm, 2008).

**Problem Statement**

Students with an EBD continue to have more academic and behavioral problems compared to students with other disabilities. Academic achievement and self-concept are affected when students are unable to negotiate social demands, perform academic tasks, and meet expectations (Lane et al., 2008; Lane, Givner, & Pierson, 2006; Mooney et al., 2006). There continues to be a shortage of personnel qualified to address the individual needs of these students, and poor services or no services are found (Nelson, 2003;
Prather-Jones, 2011). This population is likely to continue to have low levels of academic achievement and negative self-concept issues, along with mental health problems, if needs are not met (Nelson, 2003; Prather-Jones, 2011).

Students with an EBD were the least successful when placed into a MLRE with their nondisabled peers (Sciarra, 2011). However, the reason for this lack of success may have been a shortage of qualified personnel and learning environments adequately equipped to cope with this population (Kauffman, 2003, 2008; Nelson, 2003). Students with an EBD in the MLRE may be exposed to parallel academic goals and learning environments from which children can learn age-appropriate behaviors from nondisabled peers (Hallahan et al., 2011).

The problem addressed in this study was that research concerning the placement of students with an EBD has been conflicting and insufficient (Rutherford et al., 2007). Students with EBD have been compared primarily to nondisabled peers (Vannest, Temple-Harvey, & Mason, 2009). In studies in which SCLE and MLRE have been compared for this population, learning environments have been inadequate, and there has been a shortage of qualified personnel adequately equipped to cope with the students (Kauffman, 2003, 2008; Nelson, 2003). There has been a need to conduct these comparisons in learning environments that provided the greatest chance for academic achievement and increases in self-concept (Prather-Jones, 2011; Sciarra, 2011).

Purpose

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary
data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (in mathematics, reading, and language usage) and self-concept (in terms of the overall score for physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity). Data were gathered from archived records in two middle schools located within an urban school district in South Carolina. Records represented the scores of 140 middle school students (70 per group) in Grades 6, 7, and 8, diagnosed with EBD. Data were gathered for the 2007 school year, with 2005 data for the same students serving as baseline comparisons. Academic achievement was measured with the Measure of Academic Progress (MAP), a computer-adaptive assessment of skills in mathematics, reading, and language usage. Self-concept was measured as a composite of the six subscales of the Piers-Harris 2 (Piers & Herzberg, 2002).

**Theoretical Framework**

The current study of self-concept among adolescents was based on theories of self-concept, or the way in which a person perceives himself or herself (Hadley et al., 2008; Bandura, 1997; Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Attributes of self-concept include control, acceptance, and responsibility. Negative self-concept in adolescence is associated with a variety of maladaptive behavioral and emotional problems (Hadley et al., 2008). Assessing and intervening during the adolescent years is critical in reversing negative self-concept. The basis for measuring the self-concept of adolescents is the understanding of self in terms of social characteristics or abilities, physical appearance, body image, and inner thinking (Hadley et al., 2008).
Bandura’s (1997) concept of self refers to an individual’s confidence that he or she can perform certain behaviors in certain situations. Bandura’s perception of self is behavior specific and situation specific. For example, students may recognize that they have more confidence in expressing themselves in a small group than they have in front of an entire class. This form of self-confidence is situation specific. A student may perceive a higher confidence in math, but a lower confidence in reading. This form of confidence is behavior specific. Bandura et al. (2001) also argued that an adolescent’s desire to succeed was based upon the learner’s previous experiences with similar tasks and was derived from observations (Bandura et al., 2001). In the current study, the evaluation of differences in self-concept was based on Bandura’s (1997, 2001) concept of self.

Critics of Bandura’s (1997) concept of self (e.g., Hawken, Vincent, & Schuman, 2008) argued that behavior has been found to be more dependent on external factors than on internal factors, as Bandura’s theory suggested. Other critics (e.g., Kessler, Chiu, Demler, & Walters, 2006; Manning, 2007) argued that much of Bandura’s research focused too much on the situation of behaviors. Some researchers (e.g., Awad, 2007) also argued that the theory lacked attention to biological or hormonal processes.

This study of academic achievement among students with EBD was based upon Chisolm’s (2008) broken glass theory. The broken glass theory focused on specific classroom behaviors that allowed the teacher to have better control of the learning environment and develop a positive plan for EBD students to recover and focus on academic skills. This theory was based on reality therapy, a form of therapy enabling an
individual to examine what he or she really wanted, accept who he or she was, and accept responsibility for his or her own actions (William Glasser Institute, 2007).

The broken glass theory was a synthesis of ideas from several theorists, as well as of research from the Collaborative for Academic, Social, and Emotional Learning (2007) and the William Glasser Institute (2007). This theory focused on allowing the teacher to solve problems concerning dysfunctional emotions, behaviors, and cognitions through a goal-oriented, systematic procedure that focused on the present and took away from academic instructional time (Chisolm, 2008). Broken glass was a metaphor designed to represent the views students with an EBD had of themselves, as well as how others perceived them. This representation assisted students with an EBD with acknowledging and accepting who they were and what they were capable of accomplishing.

The broken glass theory allows the teacher to develop and implement techniques to foster cognitive-behavioral skills (Chisolm, 2008). These skills are needed to manage the learning environment and various emotional and behavioral issues more effectively so as to focus on the academic task at hand. Next, the teacher would be able to manage the displayed behaviors. This process allowed students with an EBD the time and energy to develop a focused treatment plan in a more restrictive environment. More time could then be devoted to focusing on academic subjects instead of emotional and behavioral issues. The broken glass theory explains the need to provide a learning environment with optimal support for the student with an EBD. The theoretical perspective of the broken glass theory was used in this study to determine which learning environment is more suited for students with an EBD.
The results of this study provided insight that using the broken glass theory as an academic and self-concept component improved the academic and emotional and behavioral prospective of students with an EBD. The new component of the broken glass theory can be used to create a short-term strategy to assist the student with an EBD in understanding how thoughts, emotions, and behaviors are connected and affect one another. The students can ask themselves when in a stressful or negative situation: “Will my actions make the situation worse or better?” If the student perceives that the actions will worsen the situation, the student is to stop the behavior, seek help from an adult, and develop a plan to make the situation better. This approach demonstrates the use of the theory for both academic and emotional and behavioral problems.

**Research Questions**

Two research questions were presented, together with associated null and alternative hypotheses. The research questions were designed to compare both academic achievement and self-concept among students with EBD in two different learning environments.

**Q1.** To what extent, if any, is there a difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?

**Q2.** To what extent, if any, is there a difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?
Hypotheses

**H1₀.** There is no significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H1ₐ.** There is a significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H2₀.** There is no significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H2ₐ.** There is a significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

Nature of the Study

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (in mathematics, reading, and language usage) and self-concept (in terms of physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity).
Archival records were gathered from 140 students with an EBD in two urban middle schools in northern South Carolina. The selection of the participants was based upon enrollment in the two self-contained programs for children with an EBD. Both middle schools serviced students with an EBD in Grades 6, 7, and 8. In the two schools, the same measures were used for academic achievement and self-concept, and both schools provided SCLE and MLRE learning environments for students with an EBD in 2005 and 2007.

Academic achievement was measured with MAP (Northwest Evaluation Association, 2012). MAP assessments are shorter than traditional standardized assessments and involve less class time, but still result in detailed, accurate information (Northwest Evaluation Association, 2010). MAP scores are based on a Rausch Unit (RIT) scale that measures mathematics, reading, and language usage. A RIT scale is a curriculum scale based on the use of the difficulty values of individual items to estimate student achievement (Northwest Evaluation Association, 2010). The use of the RIT provides educators with better opportunities to address academic issues in a timely manner by relating the numbers on the RIT scale directly to the difficulty of items on the tests (Northwest Evaluation Association, 2010).

Self-concept was measured using the Piers-Harris 2, an instrument designed to assess individuals ages 7 to 18 (See Appendix A). The Piers-Harris was renormed in 1984 to include a nationally representative sample of 1,387 students ages 7 to 18, recruited from school districts throughout the United States (Piers & Herzberg, 2002). The Piers-Harris 2 is composed of 60 items covering six subscales: physical appearance
and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity. A total score is also given.

Split-plot analyses of variance (ANOVA), also termed SPANOVAs, were used to compare the two learning environments (MLRE and SCLE) in terms of academic achievement and self-concept scores for 2005 and 2007. The between-group main effects were confirmed with independent samples $t$ tests for both 2005 and 2007 scores. Within-group differences and Year x Class Type interactions were also reported. However, the research questions were addressed in terms of group main effects for 2007, with 2005 scores used for baseline comparisons.

**Significance of the Study**

Students with an EBD are at risk for negative outcomes in academic, social, and behavioral domains (Clark, 2007; Hagner et al., 2008). These behavioral patterns also have long-term effects. Many individuals with an EBD have difficulties adjusting to life, and these difficulties become adult mental health issues (Epstein, Atkins, Cullinan, Kutash, & Weaver, 2008).

Most research in the area of EBD has involved measuring and analyzing students with EBD in learning environments not taught by qualified personnel (Prather-Jones, 2011). This study was unique in that both learning environments examined had exceptional academic, emotional, and behavioral support from highly qualified personnel. The school district in which the research occurred offered two types of learning environments (SCLE and MLRE) for middle school students with an EBD. The two special education teachers who taught the two groups were highly qualified mental-health professionals certified in teaching students with an EBD. The special education teacher
who taught the SCLE was a trained cognitive behavioral therapist, and the special education teacher who taught in the MLRE was a Licensed Master Social Worker. The special education teachers also had instructional aides who were highly qualified and trained in handling students with an EBD.

The second area of uniqueness in this study involved analyzing data from students with an EBD from two different settings. Researchers have consistently compared students with an EBD to nondisabled peers (Vannest, Temple-Harvey, & Mason, 2009). This study expanded on the current body of research knowledge with a comparison of academic achievement and self-concept among students with an EBD in two different learning environments (SCLE vs. MLRE).

The findings of this study are a contribution to the broken glass theory (Chisolm, 2008). According to the theory, the teacher can develop and implement techniques to foster cognitive-behavioral skills (Chisolm, 2008). These skills are needed to manage the learning environment and various emotional and behavioral issues more effectively so as to focus on the academic task at hand. By fostering these skills, highly expert professionals may have been responsible for ensuring that students improved both in academic achievement and in self-concept.

Definitions

**Academic achievement.** Academic achievement is the measurement, by either examinations or continual assessment, of what a person has accomplished (Bardon, Dona, & Symons, 2008).

**Accommodation.** Accommodation refers to techniques and materials that allow individuals with disabilities to complete school or work tasks with greater ease and
effectiveness. Examples include tape recorders, spell checkers, and expanded time (Nelson, Benner, & Mooney, 2008).

**Behavioral intervention plan.** A behavior intervention plan is a behavioral plan that includes positive strategies, programs, curricular modifications, and supplementary aids and supports for managing a student’s behavior (Marlow & Disney, 2006).

**Continuum.** Continuum is a term used to describe a full range of special education services provided to students who qualify for special education (Montague, Enders, & Castro, 2007).

**Diagnostic tests.** Diagnostic tests are tests that diagnose or identify areas of academic, physical, mental, emotional, and behavioral needs and strengths of students (Bardon et al., 2008).

**Educational placement services.** Educational placement services are a coordinated set of activities focused on improving the academic and functional achievement of students with disabilities in their learning environment (Wright, 2007).

**Educational planning.** Educational planning is the planning of academic and nonacademic courses, learning experiences, and employment for students with disabilities (Chisolm, 2008).

**Emotional and behavior disorder (EBD).** An EBD is an educational disability defined by the U.S. Department of Education under the Individuals with Disabilities Education Act (IDEA). EBDs are characterized by (a) an inability to build or maintain satisfactory interpersonal relationships with peers and/or teachers, (b) an inability to learn that cannot be adequately explained by intellectual, sensory, or health factors, (c) consistent or chronic inappropriate types of behavior or feelings under normal
conditions, (d) displayed pervasive mood or unhappiness or depression, and (e) a displayed tendency to develop physical symptoms, pains, or unreasonable fears associated with personal or school problems (United States Department of Education, 2007b).

**Functional behavioral assessment (FBA).** A functional behavioral assessment is the process of determining the cause or function of behavior before developing an intervention. The hypothesized cause or function of behavior must determine the intervention (Bloom, Iwata, Fritz, Roscoe, & Carreau, 2011).

**Individualized education plan (IEP).** An IEP is a plan developed annually, as required by federal law, for students identified as having educational disabilities. The plan includes the present level of performance; long-term goals; short-term objectives; criteria for measuring achievement; transition, amount, and type of special education; participation in general education; dates of initiation; and duration of services (Buckley, 2009).

**Individuals With Disabilities Education Act (IDEA 2004).** IDEA is an amendment to the Education of the Handicapped Act of 1975. IDEA is a comprehensive law that supports a free appropriate public education, which includes special education and related services for children and youth with disabilities (United States Department of Education, 2007b).

**Individualized Family Service Plan.** The Individualized Family Service Plan is a written plan developed by a multidisciplinary team that includes the family of the special education student. The plan is based on family concerns, priorities, resources, and the child’s present level of functioning (Gagnon, Maccini, & Houchins, 2009).
**Learning environment.** The learning environment is the current placement of the students with EBD in either a SCLE or a MLRE (Chisolm, 2008).

**Mainstream least restrictive environment (MLRE).** A MLRE allows students with EBD to be educated in the core academic areas (language usage, reading, and mathematics) with peers in the general education learning environment (Chisolm, 2008).

**Placement.** Placement is a designation of the special education service delivery model through which a student receives special education services, such as itinerant services, resource services, SCLEs in a general education school, and a self-contained classroom in a special education school (Ferrara, 2006).

**Public Law 94-142** (changed in 1990 to IDEA). Public Law 94-142 is a law that ensures due process rights and mandates, including a free appropriate public education (FAPE), for all children with disabilities, education in the least restrictive environment (LRE), and IEPs (United States Department of Education, 2007a).

**Self-contained least restrictive environment (SCLE).** A SCLE is a small educational setting with relatively few students. SCLEs are created to foster and enhance support for students with special needs or specific difficulties (Ferrara, 2006).

**Social skills.** Social skills are any skills facilitating interaction and communication with others (Hawken et al., 2008).

**Special education.** Special education is a federal education program specially designed to offer free instruction to meet the unique needs of a child with special needs (Smith, 2007).
Summary

Behavioral patterns of students with an EBD have long-term effects in academic, social, and behavioral domains (Clark, 2007; Hagner et al., 2008). Most research in the area of EBD has involved measuring and analyzing students with an EBD in learning environments not taught by qualified personnel (Prather-Jones, 2011) and comparing data with nondisabled peers (Vannest, Temple-Harvey, & Mason, 2009). This quantitative, archival study was unique in that both learning environments had exceptional academic, emotional, and behavioral support from highly qualified personnel. The school district in which the research occurred offered both SCLE and MLRE, two types of learning environments for middle school students with EBD.

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). The design of the study was archival that used a split-plot analyses of variance (ANOVA) to compare the two learning environments (MLRE and SCLE) in terms of academic achievement and self-concept scores for 2005 and 2007.
Chapter 2: Literature Review

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). The literature search for this study was conducted using peer-reviewed articles from university libraries and recently published books and journals in the field of special education and psychology. Additional articles and books that were cited in the literature review came from various Internet library databases, including the Education Resources Information Center (ERIIC), ProQuest, and SAGE reference online. Although 85% of the reviewed studies are at most five years old, some of works cited are older. This was due to the fact that some of the older works cited were identified as seminal works. These particular works initiated and intensified research areas that included students with emotional and behavioral disorders, learning environments and self-concept. Such studies include Bandura (1997), Bandura et al. (2001), Kauffman (2003), and Nelson (2003).

This chapter begins with a review of literature outlining the historical changes in special education and specifically EBD students. The review continues with literature that expands on the influence of legislation on special education qualification and the educating of EBD students in different learning environments. This chapter also explains the many facets of EBD students by examining characteristics, assessments, self-concept, transitioning, and educational placement of EBD students.
Historical Changes in Special Education

Historically, persons with special needs resided in hospitals, asylums, and other institutions that offered little education (National Education Association, 2006). One of the earliest advocates of persons with special needs was an educator and physician named Jean Marc Gaspard Itard, who argued that special teaching methods could be useful in educating people with special needs. In 1801, Itard discovered a young boy living wild in the woods of France. For four years, Itard used systematic methods to teach the young boy how to communicate and perform daily independent living skills, such as bathing and dressing himself. A French student of Itard’s, Edouard Segun, immigrated to the United States in 1858 and developed several guidelines for educating children with special needs (Gargiulo, 2010).

As a result of Segun’s efforts to educate children with special needs, a variety of special schools opened throughout the United States during the eighteenth and nineteenth centuries. These special schools were not state or federal agencies, but were the efforts of individual educators who saw a need (Lipsky & Gartner, 2007). Thomas Hopkins Gallaudet, an American educator and minister, established the first public school for the deaf in 1816. In 1829, John Fisher opened the first public school for the blind in Massachusetts, which is still in operation as the Perkins School for the Blind (Hallahan et al., 2011; Lipsky & Gartner, 2007).

Past trends with an impact on current trends in special education involve instructional interventions and placement of students with special needs. In 1918, Elizabeth Farrell created the Council for Exceptional Children. The purpose of this
organization was to improve the educational outcomes for individuals with special needs (Council for Exceptional Children, 2007a).

During the twentieth century, the major movement in special education focused on individualized attention and integrating the special-needs student into the regular curriculum (Council for Exceptional Children, 2007b). The passage of the Education for All Handicapped Children Act (EHCA) in 1975 guaranteed that all public schools would provide equal access to education for students with physical and mental disabilities. Thirty-six years later, following several reauthorizations and a name change to IDEA, special education continues to receive mixed reviews. According to Hibel, Farkas, and Morgan (2010), poor and minority students have been overrepresented in special education across America. Another criticism involves labeling and the educational placement of special-needs students in special education. Hallahan, Kaufman, and Pullen (2011) stated that labeling special-needs students usually leads to stigmas that result in lower expectations from and lower performance by these students.

Specifically, the historical context of educating EBD students is relatively new. Programs in the public schools for EBD students have only been in existence since the 1950s (Wood, 2001). It was not until the enactment of Public Law 94-142 in 1975 that all school districts receiving federal money were required to provide educational services for EBD students (Smith, 2007). Each state and Local Education Agency (LEA) continues to create and design its own program to meet the needs of EBD students. Some programs are much more progressive than others, while some have difficulty determining if the behavior being displayed is emotional or behavioral (Kern et al., 2009).
In the years between 1987 and 1998, there was a significant decline in the funding of experimental research for EBD students and an increase in qualitative and descriptive cognitive psychological research (Nelson, 2003). This trend led many advocates to call for a reduction in the number of special-needs students in special education programs. Programs identified with high incidences of specific learning disabilities and emotional and behavioral disorders were particularly hard hit (Nelson, 2003). During the early 2000s, Positive Behavioral Interventions and Support (PBIS) became the focus of “what works” for students with emotional and behavioral disorders (Lane et al., 2008). This particular research focused on an analysis of systemic, environmental, and explicit means utilized to address the needs of students with behavioral difficulties.

At the time of this study, the current movement in the field of special education, which includes EBD students, is based on three levels: preventive, remedial, and compensatory (Rock, Thead, Gable, Hardman, & Acker, 2006). The levels are the focus of individual planning with specialized and intensive goal-directed instruction. Research-based methods also guide the techniques used to instruct special-needs students.

**Federal and State Mandates for Special Education**

The changes to laws that address the education of students with special needs in different learning environments have guaranteed students with special needs the rights to fair assessments and educational placement and a free and appropriate public education (FAPE) in the least restrictive learning environment possible. The federal mandate, IDEA, addresses the difficulty some special-needs students have with learning due to uncontrollable physical, mental, medical, or behavioral limitations that interfere with educational placement and the ability to function properly in a regular learning
environment setting. Assessment in different learning environments is also covered under Public Laws 94-142 (EHCA), 105-17 (IDEA 97), and 108-446 (IDEA 2004).

EHCA, passed by the United States Congress in 1975, was the first of several public laws that protect special education programs and special-needs students (Gargiulo, 2010). EHCA was designated Public Law 94-142 (P. L. 94-142). In 1990, EHCA was renamed IDEA under Public Law 101-476 (P. L. 101-476, IDEA). Major revisions were made to IDEA in 1997 under Public Law 105-17 (P. L. 105-17, IDEA 97) and in 2004 under Public Law 108-446 (P. L. 108-446, IDEA 2004) (United States Department of Education, 2007a). Two basic premises form the foundation of IDEA. The first premise is that every student is entitled to FAPE, and the second is that FAPE will be provided in the LRE (National Coalition for Parent Involvement in Education, 2006).

In 1997, major revisions made to the IDEA under P. L. 105-17 (IDEA 97) included the expansion of the definition of special-needs students to include the developmentally delayed between the ages of three and nine (Wright, 2006). In addition, one of the revisions stated that parents must attempt to solve disputes with schools through LEAs and through mediation. Yet another revision in 1997 authorized additional grants for technology, disabled infants and toddlers, and parent training. In 2004, IDEA was amended as P. L. 108-446 (IDEA 2004) to align with the No Child Left Behind Act of 2001 (NCLB) and to address discipline issues of students with special needs (Wright & Wright, 2007).

Under IDEA 2004, discipline of special-needs students with challenging behaviors, especially students with EBD, encompasses three primary concerns (Smith & Katsiyannis, 2004). The first concern involves the continued over-reliance on
exclusionary practices in an attempt to reduce problem behavior. The second factor involves the limited use of consistent preventative approaches proven to be effective in the reduction of problem behavior. The final factor involves the lack of implementation of strategies shown to be most likely to bring about change to a student’s behavior once that child has demonstrated behavior subject to disciplinary action (Katsiyannis, Smith, & Ryan, 2011).

According to Epstein, Atkins, Cullinan, Kutash, and Weaver (2008), several changes occurred in the area of discipline under IDEA 2004. One change designated a new authority for school staff to determine discipline on a case-by-case basis. Another change included new standards for manifestation determinations, where the burden of proof shifted to the parents, who must prove that the behavior was caused by or had a direct and substantial relationship to the child’s disability or was a direct result of the LEA’s failure to implement the IEP.

The rules and regulations that mandate special education throughout the United States differ from state to state; however, federal law mandates that all states follow minimum standards to ensure the proper and appropriate educational placement and education of students with special needs. The latest federal mandate is IDEA 2004. IDEA 2004 mandates how states and public agencies are to provide early intervention, special education, and related services to children with special needs from birth to the age of 21 (United States Department of Education, 2007b). IDEA is a civil rights law, but states are not required to participate. As an incentive for states to adopt and apply the federal mandates, IDEA makes funds available to states that educate students with special needs (Wright, 2006).
The federal law mandate under IDEA 2004 lists two basic rights: (a) Every student is entitled to FAPE and (b) education will be in the LRE. FAPE, as defined by the United States Department of Education per IDEA 2004, is an education and related services provided at the public’s expense. A state’s education agency and local districts meet the standards of FAPE by offering programs to meet children’s special needs (Kern et al., 2009). The right of LRE mandates that all students with disabilities are educated with non-disabled peers to the greatest extent possible. The intent of the LRE stipulation is to prevent unnecessary segregation of students with disabilities (Steedman, 2008).

An IEP determines the student’s specific educational needs, includes annual goals, determines whether the placement is appropriate, and specifies program modifications, assessment accommodations, counseling, and other special services the student might need (Wright, 2006). For example, the state of South Carolina follows the minimum federal mandate and any additional requirements imposed by the state of South Carolina. The South Carolina Department of Education developed a publication called Implementing Individualized Education Programs in the Least Restrictive Environment addressing five areas that ensure compliance with both federal and state mandates (South Carolina Department of Education, 2007). The first area is child find, which is a free service tailored to the special needs of individuals from birth to age 22. The free services offered include screening and appropriate evaluations. The second area is confidentiality of the student’s records and information. The third area addressed by the South Carolina Department of Education (2007) is due process. According to the Department, due process is available to any parent who feels the need for an impartial process to resolve a disagreement between the parent and
the local school district over issues of special education services. The fourth area involves implementing the LRE. The state of South Carolina follows the mandate set forth by IDEA 2004 and clearly bases the placement of the child in the LRE on the needs of the student as defined in the Individual Education Plan (IEP) and not solely on the student’s special needs (South Carolina Department of Education, 2007).

The fifth area addressed by the South Carolina Department of Education (2007) is surrogate parents. The Department states that if a child is a ward of the state, the state must name a surrogate parent. A copy of the court order stating that the Department of Social Services (DSS) has legal custody of the child serves as the determination that a child is a ward of the state. DSS cannot act as the parent of the child for special education purposes because IDEA 2004 requires the assignment of surrogate parents for students who are wards of the state. If the local district does not have a court order giving DSS custody, the local school district must attempt to locate and notify the parent. If the parent contacts the school district and wishes to be involved in the education of his or her child and the parent’s rights have not been terminated, he or she may still participate in IEP meetings as a person having special knowledge and expertise regarding the child. The surrogate parent, however, must also attend the meetings and will continue to exercise his or her responsibilities as a surrogate parent while the child is a ward of the state (South Carolina Department of Education, 2007).

The mandates established by the federal and state governments should protect special-needs students. The federal mandate is quite lengthy; however, it establishes minimum guidelines that states must follow to stay in compliance with federal law. The state has the ability to add reasonably to the law, but it cannot take away (Wright, 2007).
This situation, in turn, gives the state and local districts the ability to create an accurate and detailed IEP that will benefit each special-needs child.

**Qualifications**

The modern view of special education is that those involved are diverse and unique and should be educated with general education students (Cohen & Spenciner, 2007). The only differentiation is that the special-needs student requires an IEP to address and meet his or her special needs. Students in special education range from those with severe special needs (e.g., brain injury) to those who show outstanding academic performance (gifted or artistic). According to the Data Accountability Center (2006), the largest areas of special education served include children with learning disabilities (44.6%), speech and language impairments (19.1%), other health impairments (9.9%), mental retardation (8.6%), and EBD (7.5%).

A child may qualify for special education services at birth under Part B of IDEA 2004 but cannot be more than 22 (depending on when the birthday is) years of age and not yet graduated from high school (Walker, Severson, & Seeley, 2007). States differ slightly in identifying disabilities, but they all follow the same definition set by the United States Department of Education (2007a), which acknowledges 13 categories of disabilities, with specific criteria for each. These categories include specific learning disability (SLD), speech or language impairment (SI), other health impairment (OHI), mental retardation (MR), emotional and behavioral disorders (ED, EBD), autism, multiple disabilities, developmental delay, hearing impairment (HI), orthopedic impairment (OI), visual impairment (VI), traumatic brain injury (TBI), and deafness and blindness.
Special education is part of the permanent educational landscape, and it has made positive impacts on the lives of children who cannot otherwise participate in general education due to their special needs. According to a survey by the National Coalition for Parent Involvement in Education (2006), most parents want their special-needs child to spend the majority of his or her time in general education classes and, regardless of the severity of the special need, to be placed in the best learning environment for the child. When a special-needs student is excluded from general education, it must be due to his or her special needs, and an explanation and justification are defined in an IEP.

**Individual Education Plan**

The IEP is a written document formulated for each special-needs student in public schools that meet federal guidelines for special education (Buckley, 2009). The IEP is created through a team effort and is reviewed at least once a year. Before the formulation of an IEP, the special-needs student must meet two criteria mandated by federal law: he or she must have a special need and must need special education and the services it entails to function properly in a regular education setting (Hallahan et al., 2011).

An IEP should, at a minimum, indicate the present level of educational performance, goals, student’s progress, services, accommodations, exclusion from general education, plan for transition, IEP team member notice or waiver of meeting, and any changes to the IEP (Cohen & Spenciner, 2007). The present level of educational performance is a statement of the child’s current level of education and functional performance. Academic and functional level areas include how the student’s special need hinders his or her ability to participate in the general education curriculum (Spanjnj, 2009). Annual goals are designed to meet the student’s individual needs that result from
the disability. The annual goals must be measurable and include both academic and functional goals (National Coalition for Parent Involvement in Education, 2006). Academic goals address the subjects taught in school. Functional goals address nonacademic tasks, usually activities used in everyday life. For example, an EBD student might have a tendency to interrupt people before they finish speaking, so the functional goal could be for the student to let speakers finish before he or she speaks.

The student’s progress is measured while the student’s IEP is active. The section on progress must have a description of how to measure and report the student’s progress. The progress is not measured against state standards; however, the annual goals are a benchmark of how much or little progress has been made (Buckley, 2009). The IEP team determines the periods for reporting the progress. Usually, the times are quarterly or concurrent with progress reports and or report cards (Spannj, 2009). IDEA 2004 eliminated two requirements. The first requirement eliminated was to inform parents of the degree to which progress of the student is adequate, to enable the student to reach his or her goals by the end of the school year. Secondly, progress reports no longer need to coincide with the general education student progress reports (Smith, 2007).

With the implementation of IDEA 2004, peer-reviewed research must support services and instructional programs provided for special-needs students (Wright, 2007). A statement must be included in the IEP that states that peer-reviewed research determines the services (education-related and supplementary) provided, as far as practicable for the special-needs student (Wright, 2006). The projected beginning and ending dates for the services also must be included in the IEP.
The accommodation statement is mandatory in the IEP and indicates the appropriate accommodations necessary to facilitate the student’s academic achievement and functional performance (United States Department of Education, 2007a). For example, if a student needs testing in a small group, the special-needs student will take district and statewide test that measure progress in a small group. These assessments became mandatory for special-needs students under NCLB. In addition, states are required to develop guidelines for the accommodations allowed during state assessments, so accommodations for classroom instruction and testing may differ from accommodations allowed on state assessments (Carter & Horner, 2007).

Notice or waiver of meeting under IDEA 2004 offers two excuses for members of the IEP team not to attend an IEP meeting. The first case is if an IEP team member’s area of curriculum or related services is not modified or discussed during the meeting. Second, if a member’s area of curriculum or related service is under discussion, the member may submit in writing his or her input for the parent and other members of the team prior to the meeting (Spannj, 2009).

Changes to IDEA 2004 also provided two alternative methods by which parents and schools can make changes to a student’s IEP. First, once the annual review has taken place for the student’s IEP, an amendment or modification to the IEP can be made without holding another full meeting (Wright, 2006). Second, a meeting does not have to take place, but parents do have the right to request a revised copy of the IEP (Wright & Wright, 2007).

Some students in special education receive special accommodations or modifications to become successful in school. An accommodation allows a special-needs
student to complete the same assignment or test as other students, with a variation in presentation, setting, format, or time (Wright, 2006). An adjustment to the assignment or a testing situation does not change the validity of the score of the special-needs student (Cullinan, 2007). For instance, if a student with special needs has vision impairment so that he or she cannot see the test clearly, teachers may provide a Braille version of the test, or the student may take the test in a separate location that is quiet.

In some instances, when a special-needs student needs a modification, an adjustment made to an assignment or testing situation changes the standard for a particular student (National Coalition for Parent Involvement in Education, 2006). For example, a student may have an alternative assignment that requires knowing only key concepts about the material on the test. Modifications or accommodations written into a special-needs student’s IEP must fit the student’s disability and learning style. This option is primarily for students who have traumatic brain injuries or some form of physical disability that impairs the quality of their lives (United States Department of Education, 2007a).

Students classified as EBD will eventually display behaviors deemed by school and society to be inappropriate (Chisolm, 2008). If these aberrant actions become a distraction to others and self in the learning environment, IDEA requires the development of a functional behavioral assessment and behavior intervention plan to address these behaviors (Hallahan et al., 2011). A functional behavioral assessment is the process of determining the cause (or “function”) of behavior before developing an intervention. The intervention must address the hypothesized cause (function) of the behavior (Bloom et al., 2011). A behavior intervention plan is a behavioral plan that includes positive
strategies, programs, curricular modifications and supplementary aids and supports for managing a student’s behavior (Marlow & Disney, 2006).

The IEP meeting is a chance for the school, parent, and special education student to work together to design an IEP that will focus on the individual disabilities that hinder the success of the student in the general curriculum (Calumet County School District, 2006). The goals in an IEP represent what the IEP team members think the special-needs student will be able to accomplish in a year’s time. The goals are academic, developmental, and functional in nature. Academic goals, according to Spannj (2009), need to be specific, measurable, achievable, realistic, and traceable. The acronym SMAR T is a mnemonic for these criteria (LD Online, 2006):

S—The goals must be specific and significant to the child’s individual need.  
M—The goal must be measurable and meaningful to the student.
A—The IEP team must agree upon the goals. The goals must be attainable and achievable by the student.  
R—The goals must be realistic and relevant to the student’s IEP.  
T—The student’s progress or regression must be able to be traced. (LD Online, 2006)

Developmental goals in an IEP are those that prepare the special-needs student to lead a productive, independent life (Steedman, 2008). Functional goals are those built around the desires of the student and must be age-appropriate (Spannj, 2009).

**Emotional and Behavioral Disorder (EBD)**

**Definition.** EBD is a category and diagnosis commonly used in educational settings to refer to a range of more specific difficulties in children and adolescents (Sciarra, 2011). Federal regulations, under IDEA 2004, use the term *emotional disturbance* to refer to students with emotional and behavioral issues (Cullinan, 2007). Under IDEA 2004, emotional disturbance means exhibiting one or more of the following
characteristics that adversely affect a child’s educational performance over a long period of time and to a marked degree: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems (United States Department of Education, 2007b).

IDEA 2004 states that a student must meet three criteria to qualify for services under the emotional disturbance disability. First, the student must display at least one of the five characteristics indicated under the definition set forth by IDEA 2004. Second, the student must display the characteristics over a long period of time. Finally, the behavior must adversely affect the student’s educational performance (United States Department of Education, 2007a).

Many educational and mental health professionals criticized the current definition in the guidelines of IDEA 2004 (Adelman & Taylor, 2006). The major criticism involved using only the word emotional in the term. Failure to include the word behavior in the defining the term emotional disturbance excluded students with behavioral issues (Smith, 2007). The next criticism was of the term socially maladjusted. Socially maladjusted lacked a definition in IDEA 2004, and the exclusion led many in the education field to classify social maladjustment inaccurately as a conduct disorder (Adelman & Taylor, 2006). IDEA 2004 stated that behaviors must adversely affect educational performance, which leads to a lack of consistency by school officials when interpreting emotional and behavioral disorders. Another major inconsistency involves including only academic
performance, not social or behavioral performance or life or vocational skills (Levine & Wagner, 2006).

**Learning environment.** Effective emotional and behavioral learning environments provide the necessary controls for aggressive and disruptive behaviors but also offer a curriculum that helps students learn self-control, academic competence, and social skills to improve their chances of becoming productive students and members of society (Cheney et al., 2008). Learning environments for EBD students that do not provide an environment for the student to learn self-control, academic competence, and transitional skills promote disruptive behaviors that deny teachers the ability to teach and students the opportunity to learn academic and social skills (Bardon, 2007).

The most common learning environment in which to educate EBD students is the SC learning environment (Cullinan & Kauffman, 2006), which has both advantages and disadvantages. The first advantage of an SC learning environment is that the EBD student receives his or her academic work in a small, controlled learning environment with a special-needs teacher (Sciarra, 2011). The special-needs teacher then provides a learning environment that offers structure, routine, and appropriate expectations. The other major advantage is that the EBD student receives instruction from a special-needs teacher specifically trained and certified to deal with the type of disability the student has and also highly qualified in all core subjects taught. The main disadvantage a self-contained learning environment is that often the students are working at different levels, with different textbooks and different curricula (Forness, 2005).

Research-based strategies and techniques for teaching EBD students should focus on various factors that promote positive development (Lane et al., 2008). Using research-
based strategies and techniques can safely place EBD students in a learning environment that addresses emotional and behavioral problems and issues and academics and offers appropriate social skills (Sinclar, Christenson, & Thurlow, 2006). Once EBD students learn these strategies and techniques, they have the skills to maintain and self-monitor appropriate behaviors to assist them in different learning environments within the school (Hallahan et al., 2011). Due to the unexpected changes in emotions and behaviors, special and general education teachers of EBD students should be flexible and proactive when designing their learning environments (Lane, Parks, Kalberg, & Carter, 2007).

Regardless of the strategies and techniques used by special and general education teachers of EBD students, consistent and uncomplicated daily practice are required (Cullinan, 2007). For all teachers to make the most of instructional time, they should encourage responsible behaviors as they occur. According to Nelson, Benner, and Mooney (2008), when special and general education teachers of EBD students encourage responsible behaviors, the irresponsible behavior displayed by the student will eventually decrease with time.

Rules that govern the learning environment should be few in number and in words and be posted in a visible spot in the classroom. By maintaining a consistent and uncomplicated environment, the teacher can provide the EBD student with an environment that is calm and quiet (Robinson, 2007). To maintain the learning environment, the teacher of EBD students should have a system that collects and monitors the daily behavior and emotional and academic progress of each student (Chisolm, 2008).
The role of medication in treating EBD. The issue of treating students with medication at public and private schools across America has always sparked passionate debate among supporters and opponents. As late as 2003, the United States House of Representatives passed H. R. 1170, the Child Medication Safety Act (Wright, 2006). The act prevents teachers and other school personnel from coercing parents or guardians to administer or seek prescription of medicine or any other controlled substance in order for the student to attend school. The act is clear in stating that parents cannot be “forced” by school personnel into medicating their children to receive services from the school (Wright, 2006). The act also clearly states that school officials cannot prohibit the child from attending school without a prescription to address an issue caused by inappropriate behavior. Wright (2006) also noted that psychotropic drugs could be beneficial to some individuals, with a proper diagnosis and with medication properly prescribed, administered, and monitored by licensed, trained professionals.

A diagnosis of EBD for a student causes a sense of urgency in the care and administering of the prescribed medication, because of the types of medicines commonly prescribed for children diagnosed with EBD (Algozzine, Wang, & Violette, 2010). The medicines commonly prescribed address issues of attention span, depression, school phobia, enuresis, hyperactivity, aggression, schizophrenic symptoms, and major and minor mood disturbances (Hibel et al., 2010). The commonly prescribed medications are stimulants, antidepressants, and antipsychotics.

Stimulant medications commonly used in treating EBD students are normally the types of medicines that are associated with attention deficit hyperactivity disorder (ADHD) (O’Connell, Boat, Astuto, & Warner, 2009). The desired effects of the drugs
are to improve attention span and decrease disruption, as well as inappropriate and impulsive behavior (Duff, 2008). Common brand names for these medications are Ritalin, Dexedrine, Wellbutrin, Adderall, Strattera, and Effexor (American Psychological Association, 2009).

Other medicines commonly used for EBD students are antidepressants. EBD students who show extreme signs of school phobia, enuresis, or bipolar disorder are in need of antidepressants that reduce hyperactivity and depression (National Institute of Mental Health, 2006). The chemicals that affect the brain determine the type of antidepressants prescribed for the student. In theory, most antidepressants work by slowly removing certain chemicals from the brain (Webber & Plotts, 2008), although some antidepressants begin to alter the brain chemistry after the very first dose (National Institute of Mental Health, 2009). Full effects of many antidepressants usually take place in four to six weeks. Common brand names for antidepressants are Elavil, Trofanil, Prozac, Zoloft, Paxil, and Celexa (American Psychological Association, 2009).

Students commonly receive additional medication for anxiety. The treatment of anxiety disorders is usually very successful through medication accompanied by specific psychotherapy (Kessler et al., 2006). The type of medicines that are used to treat anxiety disorder do not cure the disorder but keep it under control so the person can receive psychotherapy and as a result function as normally as possible in their daily lives (National Institute of Mental Health, 2006). Anti-anxiety drugs combat anxiety and have very few side effects, with the most reported side effect being drowsiness.

These drugs are prescribed for a short period of time because the human body quickly adjusts to these types of medicines. Common brand names are Klonopin, Ativan,
and Xanax (American Psychological Association, 2009). Beta-blockers treat the symptoms of heart conditions and tremors that accompany anxiety. The common brand name prescribed is Inderal. The National Institute of Mental Health (2006) states that the first antidepressants used for anxiety disorder were Monoamine oxidase inhibitors (MAOI). Common brand names are Nardil (anxiety disorder), Parnate, and Marplan. Both Parnate and Marplan are prescribed to treat panic disorder and social phobias. People who take Parnate and Marplan must adhere to the strict guidelines of not taking certain herbal supplements, foods, birth control pills, and certain over-the-counter cold and allergy medicines. Interactions of these items can cause dangerous increases in blood pressure (National Institute of Mental Health, 2006).

The American Psychological Association (2009) reported that antipsychotic medicines are designed to treat psychosis. Students who are prescribed these medicines could be diagnosed with schizophrenia, mania, or delusional or mood disorders. The desired effect of these drugs is to reduce maladaptive behaviors such as aggression and hyperactivity and reduce delusions and hallucinations (Duff, 2008). Common brand names are Thorazine, Thiothizene, Eskalith, Depakote, Topamax, and Mirapex (American Psychological Association, 2009).

The types of medications prescribed to treat bipolar disorder are called psychotherapeutic medications, which are a group of medicines that correct or compensate for the malfunctions that take place in the body due to bipolar disorder (Kuwana, 2006). One such medication is chlorpromazine, which is a low potency antipsychotic medication used in the treatment of acute and chronic psychoses, including schizophrenia (McAuley, 2010). Chlorpromazine allows the person to perceive reality
more accurately. Once a person has been properly diagnosed and prescribed medication for the bipolar disorder, a maintenance treatment plan ensures proper and regular administration of the prescribed medicines (National Institute of Mental Health, 2006). A maintenance treatment plan not only ensures that the person regularly takes the medicine but also provides monitoring of the medicines and counseling services that provide assistance in helping the person understand and cope with the triggers that bring on episodes of mania and depression. Mood stabilizers are often used during the maintenance period to ensure regulation of emotional, behavioral, and functional mood shifts. Commonly used mood stabilizers are Lithium, Depakote, and Topamax (American Psychological Association, 2009).

Psychotherapy is also commonly used in conjunction with medication to combat emotional and behavioral disorders. The American Psychological Association (2009) stated that having a routine of psychotherapy talks with trained mental-health professionals will assist the individual in developing skills needed to discover what causes the anxiety disorder and how to deal with the symptoms. To conclude, the correct treatment plan always begins with a correct diagnosis, correct medication prescribed based on genetics and environmental factors, and a working relationship with a trained mental health professional (Adelman & Taylor, 2006).

Characteristics of EBD. There is no universally accepted explanation for what causes EBD (Hallahan et al., 2011; Robinson, 2007). However, there are several characteristics generally accepted as factors that interact individually or collectively to manifest in students with EBD. These four factors are biological, pathological, school, and cultural (National Center for Special Education Research, 2007). Research has
confirmed that biological characteristics, such as genetics, influence behavioral characteristics that include anxiety disorders, schizophrenia, conduct disorder, and oppositional defiant disorder (Cullinan, 2007). Two common behaviors that are results of the four factors are hyperactivity and aggression/self-injurious behaviors. Hyperactivity includes behaviors such as short attention span and impulsiveness. Aggression and self-injurious behaviors include acting out or fighting (Hawken et al., 2008).

Social research has also shown a link between EBD and poverty. Even though many families who live in poverty are emotionally healthy, the risk of a student developing emotional or behavioral disturbances is higher in impoverished circumstances than in abundant ones (Hibel et al., 2010). Furthermore, research indicates that children in volatile foster care placements are more likely to develop internalizing and externalizing behavior disorders than are those in more stable placements (National Center for Education Statistics, 2008). Moreover, in a national survey, 556 teachers of EBD students reported that approximately 38% of their students had been abused physically or sexually, 41% had been neglected, and 51% had been abused emotionally. In addition, some had suffered more than one kind of maltreatment (Gagnon et al., 2009).

One characteristic that benefits EBD students in the learning environment is having home and school working together positively. When a parent or family member is involved in a child’s education, it creates an advantage for the child (National Center for Education Statistics, 2008). As noted by Rutherford et al. (2007), a national longitudinal study of students with disabilities revealed a direct link between economics and parental involvement in a child’s education and indicated that students who experience peer rejection and aggression at school may be more likely to develop conduct
disorders. In addition, other research found that 38% of youth diagnosed with EBD came from households with an annual income under $12,000, and 32% came from homes with an income of $12,000 to $24,999 (Parish, Rose, Grinstein-Weiss, Richman, & Andrews, 2008).

**Internalizing and Externalizing EBD**

Students classified as having EBD have greater difficulty recognizing, displaying, controlling, and internalizing and externalizing feelings (Hadley et al., 2008). Internalizing and externalizing disorders are both emotional disorders marked by deviant behaviors and attitudes that are persistent over extended periods of time (Webber & Plotts, 2008). An internalizing behavior disorder, according to Webber & Plotts (2008), is expressed within the individual and is focused on an emotional state. Usually internalizing disorders are subtle and have no external indication of a problem, and these two non-discrete indicators usually lead internalizing disorders to be overlooked (Hawken et al., 2008). Examples of internalizing disorders are anxiety disorders, obsessive compulsive disorder (OCD), social phobia, and depression. The symptoms or evidence indicating that someone has an internalizing disorder differ depending on the specific disorder (Trout, Hagaman, Chmelka, Gehringer, Epstein, & Reid, 2008). Some general symptoms or distinguishing traits that are noticeable with internalizing disorder are feeling sad and worthless, auditory or visual hallucinations, consistent repeating of thoughts and ideas, repetitive and useless actions, frequent crying, severe headaches or other somatic problems, talk of suicide, decreased interest in activities, restricted activity levels, withdrawal, avoidance of interactions, and a lack of personal care (Hallahan et al., 2011).
Panic disorders are internalizing disorders that are especially challenging for EBD students (Kern et al., 2009). The National Institute of Mental Health (2009) characterized panic disorder as sudden attacks of terror, usually accompanied by a pounding heart, weakness, sweatiness, faintness, or dizziness. When these characteristics occur for someone diagnosed with panic disorder, the person usually experiences an overall feeling of some impending doom or loss of control based upon situations and/or circumstances (American Psychological Association, 2009). The person’s body will undergo outward or inward changes, such as being flushed, feeling chilled, having tingling of the hands and feet, feeling nausea, feeling chest pain, or feeling smothered (National Institute of Mental Health, 2009).

Externalizing disorders are usually noticeable and involve a variety of distinguishing traits, such as recurring patterns of aggression, excessive arguing, use of physical or verbal coercion, noncompliance with reasonable requests, persistent patterns of tantrums, persistent patterns of lying and stealing, lack of control and acting out behaviors, and behaviors that prevent development or maintenance of relationships (Martin, 2003; National Institute of Mental Health, 2009). Examples of externalizing disorders are substance abuse, bipolar disorder, conduct disorder, ADHD, and substance dependence. According to Webber and Plotts, (2008), ADHD causes a person to display inattentiveness, over-activity, impulsivity, or a combination of these behaviors. ADHD usually affects students with emotional and behavioral disorders, because of high levels of depression, anxiety, conduct disorder, and oppositional-defiant disorder (National Institute of Mental Health, 2009).
The treatments for internalizing and externalizing disorders that utilize medication and specific psychotherapy programs are usually highly successful (Kessler et al., 2006). The type of treatment is dependent on the type of internalizing and externalizing disorder and the person’s own preference. A proper treatment plan begins with a diagnostic evaluation to determine whether the symptoms are from the internalizing or externalizing disorder or any other physical problems (Adelman & Taylor, 2006). If the problem is from an internalizing or externalizing disorder, the practitioner then identifies the type of internalizing or externalizing disorder along with any other coexisting problems, such as alcohol use or depression (Jans, Stoddard, & Kraus, 2004). Finally, a prescription of medication, psychotherapy, or a combination of both, assists the person with the disorder. The type of medicines used to treat internalizing and externalizing disorders do not cure the disorders; however, they keep the physical symptoms associated with the disorders under control so the person can receive psychotherapy and function as normally as possible in their daily lives (National Institute of Mental Health, 2009).

Anxiety disorder. One specific and highly challenging internalizing disorder for EBD students is anxiety disorder. Gifford (2006) states that anxiety disorders are a combination of somatic, emotional, cognitive, and behavioral components. Anxiety disorder, according to the World Health Organization (2010), is a universal term that covers several different forms of abnormal anxieties and fears, classified according to signs, symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or diseases.

People who suffer from anxiety disorders constantly feel anxious. Physical symptoms of anxiety disorder include neurotic, stress-related, somatoform, and physical
ailments (Kessler et al., 2006). The physical symptoms include fatigue, headaches, muscle tension, muscle aches, difficulty swallowing, trembling, twitching, irritability, sweating, nausea, lightheadedness, having to go to the bathroom frequently, feeling out of breath, and hot flashes (National Institute of Mental Health, 2009).

The first classification of anxiety disorder is generalized anxiety disorder (GAD). According to the National Institute of Mental Health (2009), GAD is a long-lasting anxiety of at least six months. A student who worries excessively about a variety of everyday problems would be a good example of a GAD sufferer. Students diagnosed with GAD usually cannot relax; they startle easy and have difficulty concentrating. Research conducted by Kessler et al. (2006) and the National Institute of Mental Health (2006) indicated that more than 3% of children are diagnosed with GAD. When the anxiety level is mild, with proper usage of prescribed medication, children who suffer from GAD can function socially and reasonably well in a learning environment (National Institute of Mental Health, 2009). However, if the anxiety is severe, carrying out the simplest daily task becomes almost impossible.

The next classification of anxiety disorder is OCD. EBD students diagnosed with OCD are overwhelmed with constant thoughts that become obsessive or with anxiety or fear that is exaggerated (American Psychological Association, 2009). For example, an EBD student who is obsessively fearful of being contaminated could then develop an obsession that leads to behaviors that are obsessive and compulsive. The obsessive and compulsive behaviors could lead to the EBD student performing a ritual or routine of washing his or her hands every time he or she touches something. If someone interferes with the EBD student performing this ritual, the student could become aggressive to self
and others (Wagner et al., 2006). Whenever the ritual or routine is preformed, the anxiety or fear is temporarily relieved (Book & Myrick, 2006).

The third classification of anxiety disorder is panic disorder. The National Institute of Mental Health (2009) characterized panic disorder as sudden attacks of terror, usually accompanied by a pounding heart, weakness, sweatiness, faintness, or dizziness. When these characteristics take place for someone diagnosed with panic disorder, the person will usually have an overall feeling of some impending doom or loss of control. The person’s body will undergo changes that will display outward or inward signs of flushing, chills, tingling of the hands and feet, nausea, chest pain, and feeling smothered (Adelman & Taylor, 2006).

The fourth classification of anxiety disorder is post-traumatic stress disorder (PTSD). According to the National Institute of Mental Health (2009), PTSD occurs after someone has been involved in physical harm or the threat of physical harm. Three main symptoms are associated with PTSD. First, the person will relive the physical harm or threat of physical harm, for example, in nightmares or flashbacks. The second symptom is avoidance behaviors, for example, by avoiding the actual place where the incident happened or similar places. The final symptom is emotional numbing or physiologically arousing behaviors. Examples of these symptoms would be detachment from others and irritability (Kessler et al., 2006).

The next classification of anxiety disorder is social anxiety disorder (SAD). SAD is having extreme anxiety about being judged or behaving in a way that would cause embarrassment or ridicule (Kessler et al., 2006). Students who have SAD display symptoms of excessive worrying that could last days and even weeks before a social
event. The excessive worrying usually becomes so severe that it interferes with school work, relationships, and normal, everyday occurrences (Skirbekk, Hansen, Oerbeck, & Kristensen, 2011).

The last classification of anxiety disorder covers specific phobias. People with specific phobias suffer from intense fear as a reaction to a specific object or situation that, in reality, poses no threat (Kessler et al., 2006). For example, having an intense fear of being in a small space could cause a person to lose a sense of reality. This level of fear is usually associated with phobias that can lead to avoidance of common or everyday situations.

**Bipolar disorder.** Bipolar disorder, also known as manic-depression, is a neurobiological disorder that causes extreme patterns of emotional, behavioral, and functional shifts that are irregular and unpredictable. The extreme shifts in emotion, behavior, and function are symptoms of mania (high), depression (low), or mixed mood swings. These symptoms can last from days to months. Bipolar disorder affects 2.3 million adults, or roughly 1.2% of the American population (Curtis, 2007). Research by the World Health Organization (2010) has shown that men and women are equally likely to develop bipolar disorder and that the disorder shows a connection through genetics. For instance, the disorder tends to run throughout the history of a family, and the rate of bipolar disorder is higher in identical twins than in fraternal twins (Kuwana, 2006).

Historically, medical professionals believed bipolar disorder occurred only in adults; however, evidence now indicates children also suffer from the disorder. The first bipolar episode usually occurs in adolescence or early adulthood (Basco-Ramirez & Rush, 2007). The triggers that bring on bipolar disorder are usually associated with
traumatic experiences in the person’s life. The death of a family member or a chronic
illness could trigger a bipolar episode. The periods between manic and depressive
episodes are usually symptom-free.

Basco-Ramirez and Rush (2007) also state that when a bipolar person experiences
mania, he or she experiences abnormally elevated moods of happiness. These abnormal
and elevated moods of happiness usually last a week or more. According to the
American Psychological Association (2009), for a person to experience mania, he or she
must exhibit at least three of the following symptoms: inflated self-esteem, reduced need
for sleep, excessive talking, racing thoughts, distractibility, activities done to excess, and
pursuit of risky behaviors or activities. A person exhibiting mania can, without warning,
shift into a depressed state. A person who experiences depression becomes very sad and
usually has a sluggish outward appearance (Basco-Ramirez & Rush, 2007). According to
Adelman and Taylor (2006), the symptoms of a depressed state are loss of interest in
activities that were once enjoyed by the person, increase or decrease in body weight,
difficulty sleeping or oversleeping, constant pain without a known cause, repeated
thoughts of death or suicide, irritability and agitation, and trouble concentrating. Finally,
in the mixed state, according to Curtis (2007), a person is experiencing both mania and
depression at the same time. Manic mood swings accompany the person’s depressed
mood. The symptoms usually include agitation, trouble sleeping, major change in
appetite, psychosis, and suicidal thinking.

Even though there is no known cause or cure for bipolar disorder, it is highly
treatable and manageable. According to data provided by Kuwana (2006), 80-90% of
people who follow an approved treatment and maintenance plan are able to live and
function successfully in society. The treatment of bipolar disorder begins with an accurate diagnosis, followed by prescription of appropriate medication to treat the disorder.

**Assessing EBD Students**

Every school in America administers a form of assessment. Assessment, according to Watson (2006), is a measuring tool to determine the academic progress and potential of each child. For a child in special education, the purposes of assessment are to determine strengths and weaknesses, current performance level, and appropriate educational placement (Taylor, 2006). Assessing a student can be a challenge, especially if the student has EBD (Buckley, 2009).

Each revision of IDEA has addressed the assessment of special-needs students in different learning environments as a major issue. These assessment revisions aim at ensuring fair testing for students with special needs. P. L. 94-142 (EHCA) addressed assessment by focusing on the materials and/or procedures used to evaluate the special-needs student. For example, tests should be in the child’s native language or form of communication, and no single procedure can be the sole criterion for determining an appropriate educational program for the child (Watson, 2006).

P. L. 105-17 (IDEA 97) addressed the participation of special-needs students in state- and district-wide testing, along with appropriate accommodations. Under this amendment, guidelines were set for the appropriate participation of students with special needs in regular learning environments. If special-needs students need specific accommodations for their disabilities, the law requires the provision of such accommodations, modifications, or alternate assessments (Van Eck et al., 2007).
Finally, the reauthorization of IDEA under P. L. 108-446 (IDEA 2004) stated that assessments should align with the standards mandated under NCLB. IDEA 2004 stated that the state or district can develop alternative assessments for specific students with special needs (United States Department of Education, 2007b).

Under the federal guidelines that define EBD, one of the conditions is that the child must, over a long period of time, have an inability to learn that intellectual, sensory, or health factors cannot explain. The results of the assessment of EBD students can be misleading if a child’s disability and hindrances are not considered (Carter & Horner, 2007). A specific factor that can affect any student, especially if the student has a disability or inability to learn, is motivation. According to Walker, Severson, and Seeley (2007), more and more EBD students are entering classrooms without the motivation to learn for a number of reasons: (a) they have a learning disability that keeps them from keeping up with the lesson, (b) they have erratic behaviors that cause them to miss a large amount of class time, (c) they do not see school as providing any benefit to them, or (d) they are more preoccupied with what is going on outside the school than with what is going on inside the school.

The type of assessment for EBD students could also be a contributing factor in the results of the assessment. Most EBD students also have learning issues due to their behavior or other unexplained reasons. These students need some form of accommodation to assist them when taking assessments (Long & Ridone, 2006). For example, if an EBD student has extreme test anxiety and never completes a test due to this anxiety, it would be counterproductive for a teacher to continue to give a normal
paper test knowing this information (Chisolm, 2008). The teacher could assess the EBD student by letting him or her do an oral presentation or written report instead.

Many factors affect assessment results of EBD students; however, two areas of concern must be addressed by educators. First, educators should examine their teaching styles to see whether they are motivating EBD students (Cohen & Spenciner, 2007). If the educator learns that his or her teaching style is not motivating the EBD student, then he or she could form a network of teachers to share methods that could give them new ideas for motivating students (Steedman, 2008). Second, a long-term action would be to look at the local school or district and see whether motivation of EBD students is becoming an issue and, if so, to begin a dialogue with the local school administration to address the issue (Chisolm, 2008).

**Formal and informal assessments.** Formal and informal assessments can measure the performance of a student. Formal assessment relies on data that support the result from a standardized test, and informal assessment relies on content and performance-driven results (Taylor, 2006). In a case study by Weishaar and Scott (2008), informal assessments by some of the IEP team members validated a statement made by a student’s special-needs teacher. The special-needs teacher noted that the special-needs student had met his goals based on his IEP and had made tremendous progress throughout his high school years, and based on his past success on State exams with accommodations, the assumption was that he would pass the State Exit Exam for high school graduation. However, when the test results came back, they showed that the special-needs student had not passed the State Exit Exam, scoring a 68 when the minimum passing score was 75. The harsh reality about formal assessments, like State
Exit Exams mandated by NCLB, is that they do not allow and account for the human factor. Formal assessments assess the overall achievement of the student against his or her peers, while informal assessments measured performance based on measures used to inform or instruct (Taylor, 2006).

**Intelligence testing.** Intelligence testing has always been a debated topic in education; in special education, the topic of intelligence testing is the subject of a more heated debate because so many different types of learners are included in special education (Bardon et al., 2008; Taylor, 2006). The actual debate about intelligence testing begins with the word *intelligence*, a term never adequately defined. The lack of uniform understanding of the word intelligent allows many different interpretations of what intelligence means (Ross-Kidder, 2006). Intelligence tests, according to Sabornie, Cullinan, Osborne, and Brock (2006), should simply measure the intelligence of a person and the intelligence test should reflect the individual’s ability to perform based on material taught to the student.

Several different standardized tests measure the intelligence of students in special education: the Wechsler Adult Intelligence Scale-Revised or III (WAIS-R or III), the Stanford-Binet Intelligence Scales-IV (SBIS-IV), and the Kaufman Adult and Adolescent Test of Intelligence (Ross-Kidder, 2006). Just as there are several tests to measure intelligence, there are also many different points of view concerning whether intelligence tests measure learning potential or performance. The general purpose of an intelligence test, according to Taylor (2006), is to measure the predictability of performance in school. On the other hand, Strydom and Du Plessis (2007) assert that intelligence tests measure the future potential of a child. It seems that intelligence testing is subject to the
person’s understanding of intelligence rather than a universal definition of intelligence used by all in the field of education or educational research.

**Adaptive Behavior Scale**

Adaptive behavior scales are important for developing successful interventions for EBD students (Forness, 2005). The purpose of an Adaptive behavior scale is to measure an individual’s capability to deal successfully with individual and societal demands (Taylor, 2006). The most common format used to rate behavior is the Scales of Independent Behavior (SIB-R). This particular scale, revised in 1996, has several features that focus on behavior (Benet, 2007), including a behavior problem scale, an adaptive behavior assessment, and an overall score that reflects a combination of adaptive and maladaptive behaviors. According to Weishaar and Scott (2008), adaptive behavior scales rank daily functional skills related to self-care, participation in the community, and interaction with others.

The structure of the SIB-R is very flexible in terms of administration. The areas of flexibility include having age norms that range from the age of three months to over 80 years, being administered as a questionnaire or a carefully structured interview, and providing additional material for other physical disabilities like blindness (Lane et al., 2007). The SIB-R has 24 questions, in three sections, addressing the child’s maladaptive behavior.

The first section deals with internalized behaviors, with some of the questions designed to gather information concerning the child hurting self, being withdrawn, or having repetitive habits. The second section addresses asocial behaviors. For example, some questions ask where and when the child has been socially offensive or
uncooperative. The final section addresses externalized behaviors, questions relating to the possibility of the child hurting others, being disruptive to others, and destroying property. This adaptive behavior scale is popular because it collects data and measures adaptive and maladaptive behaviors from many sources and provides an overall score that takes into consideration both maladaptive and adaptive behaviors (Benet, 2007). This information provides those teaching EBD students with benchmarks and much-needed information about social skills and the student’s tolerance level when attempting academic work or new tasks.

**Self-Concept**

Research regarding self-concept of EBD students usually deals with extreme behaviors, chronic and problematic issues, and unacceptable behavior according to the norms set by society and cultural expectations (Rutherford, Quinn, & Mathur, 2007). In addition to these issues, academic struggles are common among this population. Students with EBD with negative self-concepts usually experience humiliation, rejection, and failure (Cullinan, 2007). They generally have feelings of low self-worth and self-esteem and are vulnerable to negative peer pressure (Gifford, 2006).

How students perceive themselves through their school years can have negative or positive consequences for later development (Robinson, 2007; Tonkin & Watt, 2003). Self-concept is an important indicator, and people who view themselves positively are happier than those who do not (Boreson, 2006). Furthermore, negative self-perceptions, once embedded in the thought processes of students who are EBD, tend to result in lifelong struggles with multiple developmental, behavioral, and clinical phenomena, including depression and learned helplessness (Levine & Wagner, 2006; Van Eck et al.,
2007). Furthermore, Hadley et al. (2008) found clear evidence that having a negative self-concept affects psychological, social, and academic changes among adolescents and educational placement into different learning environments while in secondary school. An overly positive view of the self may serve as a protective factor buffering the children from the negative effects of social and academic failures (McClure, Tanski, Kingsbury, Gerrard, & Sargent, 2010). This overly positive view of oneself has been found among students with an EBD (American Psychological Association, 2009 & McClure et al., 2010) and may therefore be consistent with the findings of this study.

While in these learning environments, EBD students have shown steep declines in self-concept, academic performance, motivation, and teacher/student relationships in addition to an increase in psychological distress and antisocial behaviors (Tonkin & Watt, 2003). Positive self-concept is important for an EBD student (Hawken et al., 2008). A study of self-concept trajectories of students with an EBD (Wei and Marder, 2012) showed lower levels of social self-concept and self-image compared to students with other disabilities (Wei et al., 2012). In learning environments, discipline, behavior management in a classroom, and school environment are major factors that contribute positively or negatively to an emotional or behavioral disordered student’s self-concept.

**Piers-Harris children’s self-concept scale.** In 1969, Piers, Harris, and Herzberg published the first edition of the Piers-Harris Children’s Self-Concept Scale. The first revision was in 1984, by Piers and Herzberg. The Scale is based on the participant’s own perception of self rather than observations conducted by parents or school personnel. The Scale is comprised of 60 yes-or-no items and can be administered either to individuals or in group settings. The items on the scale are one-dimensional and reflect the sub-
domains of behavior, intellectual/school, physical appearance/attributes, anxiety, popularity, and happiness/satisfaction (Piers & Herzberg, 2002).

The 1969 Scale defined self-concept as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attitudes (Bracken & Mills, 1994; Piers & Herzberg, 2002). The original intention for the Scale was for use in research and clinical applications (Bracken & Mills, 1994; Piers & Herzberg, 2002). The original sample for the 1969 version of the Scale included 1,183 children and adolescents aged 8-18 educated in a public school system in Pennsylvania (Bracken & Mills, 1994; Piers & Herzberg, 2002). The 1969 Scale reliability showed .90 internal consistency and about .91 split-half reliability, and ranged from .69 to .96 for test-retest reliability (Piers & Herzberg, 2002).

The Piers-Harris Children’s Self-Concept Scale was re-normed in 1984 to include a nationally representative sample of 1,387 students aged 7-18, recruited from school districts throughout the United States (Piers & Herzberg, 2002). The current version is the Piers-Harris Children’s Self-Concept Scale, Second Edition (Piers-Harris 2), and it was re-normed in 2002. The current edition, which was used in this research study, is one of the most widely used measures of psychological health in children and adolescents because it quickly identifies youngsters who need further testing or treatment in the clinical or educational setting (Manning, 2007). The Piers-Harris 2 assesses self-concept in individuals aged 7-18 (Piers & Herzberg, 2009). The current scale is composed of 60 items covering six subscales: physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and
popularity. The test items are simple descriptive statements, written at a second-grade reading level and requiring a yes-or-no response (Piers & Herzberg, 2002).

The total score reflects an overall self-concept, in addition to subscale scores that allow for more detailed explanations. The scores produced by the Piers-Harris 2 are percentiles, stanines, and t scores. The subscales remain psychometrically equivalent to those on the first edition, so results from that edition can be compared to those obtained using the second edition (Piers & Herzberg, 2009). The Piers-Harris 2 test-retest reliabilities for the norm groups of 3rd, 6th, and 10th graders were 0.72, 0.71, and 0.72, respectively, which were deemed acceptable by the authors (Piers & Herzberg, 2002). The internal consistency of the Piers-Harris 2 was 0.91 for the total score and 0.74 to 0.81 for the six sub-domain scores (Piers & Herzberg, 2002). Other comparable measures of self-concept include the Coppersmith Self 68 Esteem Inventory, which had a correlation of 0.63 in one study and 0.85 compared to the Piers-Harris 2 (Piers & Herzberg, 2002).

**Self-concept and academic achievement.** Self-concept is frequently associated with high educational success (Manning, 2007) and is a necessary tool in helping students aim for educational achievement (Lockett & Harrell, 2003). The association between self-concept and educational success suggests that a student’s educational skills and striving for success are more effective when a student has an enhanced self-concept. Historically, social scientists have assumed that students who performed at lower academic or educational levels were minorities and being a minority could result in a negative self-concept (Van Eck et al., 2007). Thus, there is a misrepresentation of minorities classified as having EBD in the United States public education system (Cullinan & Kauffman, 2006). Although research has traditionally linked lower self-
esteem and self-concept to lower academic achievement in Caucasian students, there is not necessarily a direct relationship between self-concept and educational success in all individuals, including African American students (Constantine & Blackmon, 2002; Mattison, 2011). On the contrary, the research of Van Eck, Evans, and Ulmer (2007) indicated that, regardless of supposed lower self-esteem and self-concept in minority students due to lower educational success, minorities have self-concepts that are equal to or higher than those of whites.

In general, researchers appear to agree that self-concept is an important factor in the educational success of a student. Differences and ambiguities arise when viewing self-concept among groups based on race. Some researchers have suggested that positive self-perception is an antecedent for high academic achievement, whereas others have found the relationship between self-concept and academic achievement for African Americans to be inconsistent (Awad, 2007). The findings of Constantine and Blackmon (2002) indicated that there was not necessarily a direct relationship between African American students’ self-esteem and self-concept as they related to their educational achievement. Furthermore, Hadley et al. (2008) found a strong relation between self-concept and GPA in 6th graders, no significant relation in high school students, and a strong relation again in college students. Van Eck et al. (2007) also concluded that self-concept predictors did not significantly predict the educational success of African American students.

The connection between self-concept and educational success among EBD students may relate to how they interpret educational success at school and in other areas of their lives (Manning, 2007). EBD students display two kinds of acknowledgment
about their self-concept: internal and external (Hadley et al., 2008; Kern, et al., 2009). With internal acknowledgment, individuals internalize negative stigma and blame themselves for lowered educational performance, whereas with external acknowledgment, individuals directly blame others for their lack of educational success (Kern et al., 2009). Such students will often verbally or physically attack themselves or structural barriers, such as racism and discrimination (Awad, 2007). Lower performing students who make external acknowledgment run the risk of having a low self-concept (Hadley et al., 2008). Having a low self-concept about their educational performance may lead to undervaluing themselves and diminishing the importance of school and the need for educational success in life (Constantine & Blackmon, 2002).

**Educational Placement of EBD Students**

To place EBD students into different learning environments adequately requires a set of rules and services, called educational placement services, which will promote success (Sitlington & Clark, 2006). Educational placement services are a coordinated set of activities focused on improving the academic and functional achievement of students with disabilities in their learning environments (Wright, 2007). These services, designed and implemented under IDEA 2004, have as their goal the improvement of the academic and functional achievement of the special-needs student (Sitlington & Clark, 2006).

Educational placement of EBD students and other special-needs students is mandated by federal law, and options must be discussed with the IEP team no later than when the student reaches the age of 16 (Sinclair et al., 2005). The educational placement process involves a set of academic and vocational activities for a student with a disability. The educational placement services offered to EBD students are based on the individual’s
special needs and include the student’s preferences and interests (Kaufman, Hallahan, Astuto, & Lloyd, 2008; Nelson et al., 2008).

In previous research, findings regarding academic achievement and self-concept among students with an EBD have been mixed (Wiley, Siperstein, Bountress, Forness, & Brigham, 2008). Over a 7-year period of a longitudinal study, the percentage of students in this population reading below grade level increased, whereas the percentage performing below grade level in mathematics remained constant (Gage, Lewis, & Adamson, 2010). The wide variability in academic progress among students with severe deficits in academic achievement may be related to the contextual differences in the types of learning environments in which students with an EBD are educated (Carr-George, Vannest, Willson, & Davis, 2009; Wiley et al., 2008).

Preparing and providing EBD students with the skills to function productively in their educational placements is pivotal to their academic success in various learning environments (Hawken et al., 2008). The majority of EBD students struggle throughout their time in school, and consequently, struggle with educational placement (Buckley, 2009). Levine and Wagner (2006) reported that 30% of EBD students receiving special education services would leave school without a diploma, with only 4% enrolling in a vocational program or two- or four-year college course. The more likely alternatives were involvement in crime, single parenthood, poverty, or substance abuse (Levine & Wagner, 2006; National Center for Special Education Research, 2007). Nelson (2003) has indicated in his studies the importance of correct educational identification and placement of EBD students, which allow EBD students to have academic achievement that prepares them to enter into society (Nelson, 2003). The skills they should have are
the functional and academic skills needed to become the most productive adults they can become (Chisolm, 2008).

**Transition Goals and Career Planning**

The purpose of IDEA 2004 was to ensure that all children with disabilities receive FAPE in the least restrictive learning environment. Section 1400(c) of IDEA 2004 addresses transition by stating that special education and related emphases should be designed to meet the students’ unique needs and prepare special-needs students for further education, employment, and independent living (Sitlington & Clark, 2006).

Transition goals and career planning in the IEP address the mandate of IDEA 2004 and are important because they constitute a plan for how a student can reach goals associated with academics as they relate to employment and independent living skills. The earlier transitional goals and career planning are addressed, the clearer the future becomes for the special-needs student (West, Corbey, Boyer-Stephens, & Jones, 2007; Wright, 2007).

Transition goals and career planning are addressed in the special-needs student’s IEP no later than when the student reaches 14 years of age. It is during the IEP meeting that transition goals and career planning are coordinated to a set of activities relating to transition from different learning environments and career planning (Wright, 2007).

Transition goals include both academic and related goals that involve career and life-skills training. These goals are developed to assist the special-needs student better with the transition from middle or junior high to high school and, eventually, with life after high school (Sitlington & Clark, 2006).

Transition planning normally takes place when the special-needs student reaches the age of 14. Until the student reaches 16 years of age, the transition goals and career
planning focus on academic courses of study that will prepare the student for possible academic courses in high school (Wright, 2007). When the student reaches the age of 16, transition goals are mandated and focus on career planning and transition services for the student. The planning and services focus on specific areas that will address the special educational needs of the student for further academic, vocational, or independent-living skills (West et al., 2007). The participants involved with transition and career planning are teachers, parents, students, and if possible professionals representing organizations that offer support services. The ultimate goal of all the participants is to assist the special-needs student in building his or her skills and reaching his or her goals for life after high school (Sitlington & Clark, 2006).

Special education addresses numerous disabilities unique to students with special needs. Usually, one of the most difficult categories to prepare adequate transitional assistance for is the EBD population. Students diagnosed with EBD may further their educations or immediately join the work force when leaving high school. However, due to the instability of their emotional or behavioral problems, transition goals for a high school EBD student must address those problems first (North Dakota Department of Public Instruction, 2009). A transitional goal for an EBD student in high school may be to have him or her work closely with a mental health professional and focus on functional skills (West et al., 2007; Wright, 2007). The functional goal could include attending classes that will develop skills for working collaboratively on teams. Another transitional goal for an EBD student in high school could be to take math through a living skills course. This type of course could prepare and assist the student in seeing how math skills apply to daily living.
The true and only purpose of any special-needs teacher is to provide the best opportunity for the special-needs student to succeed (Wright, 2007). Setting transition goals and career planning, done correctly, provide the EBD student with the skills needed to transition from one learning environment to the next and to adulthood (Cheney et al., 2008).

Summary

Chronological special education has evolved from separating students with special needs from society to including them in the educational environment as appropriately as possible. The focus of special education has always been on individualization with specialized instruction (Smith, 2007). To ensure an individualized program, an IEP is written for each special-needs student in public schools that meet federal guidelines for special education (Sinclar et al., 2006). As a result, many children with special needs have been able to participate in the regular learning environment.

For EBD students, exclusion from the general education learning environment could be a common occurrence because of their erratic and disruptive behaviors (Gagnon et al., 2009). Most students classified as EBD have a multitude of internal and external problems with which to contend (Wagner et al., 2006). Compared with their non-disabled peers, EBD students have weak outcomes with higher negative or deviant incidents (Vannest et al., 2009). Furthermore, students diagnosed with EBD have poorer social skills, lower academic achievement, self-concept issues, and higher incidences of psychiatric conditions, particularly conduct disorder problems (Boreson, 2006).

In addition, a lack of academic success for EBD students has been linked to low self-concept (Manning, 2007). Having high self-concept is frequently associated with
high educational success (Gifford, 2006). EBD students have lower academic success and face negative environments at home and at school (Nelson et al., 2008). Having these characteristics has been linked to lower high school graduation rates, limited postsecondary participation, fewer employment opportunities, less financial independence, and more limited interpersonal relationships (Buckley, 2009). Research has also shown that EBD students are more likely to be involved in criminal activities that lead to substance abuse and criminal activities (Boreson, 2006; National Longitudinal Transition, 2007). The purpose of this literature review is to elucidate the history of special education and its influence on educational placement of EBD students in different learning environments. In addition, the literature review gives details of the many components that characterize and impact EBD students.
Chapter 3: Research Method

Students with an emotional and behavioral disorder (EBD) continue to have more academic and behavioral problems compared to students with other disabilities. Academic achievement and self-concept are affected when students are unable to negotiate social demands, perform academic tasks, and meet expectations (Lane et al., 2008; Lane, Givner, & Pierson, 2006; Mooney et al., 2006). There continues to be a shortage of personnel qualified to address the individual needs of these students, and poor services or no services are found (Nelson, 2003; Prather-Jones, 2011). This population is likely to continue to have low levels of academic achievement and negative self-concept issues, along with mental health problems, if needs are not met (Nelson, 2003; Prather-Jones, 2011).

Students with an EBD were the least successful when placed into a mainstream least restrictive environment (MLRE) with their nondisabled peers (Sciarra, 2011). However, the reason for this lack of success may have been a shortage of qualified personnel and learning environments adequately equipped to cope with this population (Kauffman, 2003, 2008; Nelson, 2003). Students with an EBD in the MLRE may be exposed to parallel academic goals and learning environments from which children can learn age-appropriate behaviors from nondisabled peers (Hallahan et al., 2011).

The problem addressed in this study was that research concerning the placement of students with an EBD has been conflicting and insufficient (Rutherford et al., 2007). Students with EBD have been compared primarily to nondisabled peers (Vannest, Temple-Harvey, & Mason, 2009). In studies in which a self-contained learning environment (SCLE) and MLRE have been compared for this population, learning
environments have been inadequate, and there has been a shortage of qualified personnel adequately equipped to cope with the students (Kauffman, 2003, 2008; Nelson, 2003). There has been a need to conduct these comparisons in learning environments that provided the greatest chance for academic achievement and increases in self-concept (Prather-Jones, 2011; Sciarra, 2011).

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (in mathematics, reading, and language usage) and self-concept (in terms of the overall score for physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity). Data were gathered from archived records in two middle schools located within an urban school district in South Carolina. Records represented 140 middle school students (70 per group) in Grades 6 through 8, diagnosed with EBD. Data were gathered from archived records in two middle schools located within an urban school district in South Carolina.

Records represented the scores of 140 middle school students (70 per group) in Grades 6, 7, and 8, diagnosed with EBD. Data were gathered for the 2007 school year, with 2005 data for the same students serving as baseline comparisons. Academic achievement was measured with the Measure of Academic Progress (MAP), a computer-adaptive assessment of skills in mathematics, reading, and language usage. Self-concept was measured by a total score that communicated the overall essence of self-concept
while six subscales provided a more interpretive analysis. Total score was the number of items endorsed in the direction of positive self-concept from the six subscales, thus having a raw score range of 0 to 60 (Piers & Herzberg, 2009). The six subscales are:

Behavioral Adjustment (BEH): 14 item scale that measures admission or denial of problematic behaviors.

Intellectual and School Status (INT): 16 item scale that measures the child’s evaluation of his or her own abilities in terms of intellectual and academic tasks.

Physical Appearance and Attributes (PHY): 11-item scale that measures a child’s assessment of his or her own physical appearance as well as their appraisals of certain personality attributes such as ability to express one’s ideas and leadership abilities.

Freedom from Anxiety (FRE): 14-item scale that measures anxiety and dysphonic mood.

Popularity (POP): 12-item scale that captures the child’s evaluation of his or her own social functioning.

Happiness and Satisfaction (HAP): 10 item scale that measures a child’s feelings of happiness and satisfaction with life (Piers & Herzberg, 2002).

This chapter contains a description and rationale for the research design, followed by a discussion of the participants, the research instruments, and operational definitions of variables. Data collection, processing, and analysis are then discussed. This chapter also includes the methodological assumptions, limitations, and delimitations of the study. The chapter concludes with ethical considerations of the study and a summary.

The following research questions and hypotheses were developed to guide the investigations of differences between academic achievement and self-concept scores for two groups of students, based upon the type of learning environment in which the
students were placed. Two research questions are presented, together with associated null and alternative hypotheses.

**Q1.** To what extent, if any, is there a difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?

**Q2.** To what extent, if any, is there a difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?

**H1.** There is no significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H1**. There is a significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H2**. There is no significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**H2**. There is a significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

**Research Methods and Design**

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the
type of learning environment in which they were placed (SCLE vs. MLRE). A quantitative method was selected because a relationship between two groups can be deduced on the basis of objective evidence (Black, 1999). Quantitative data are presented in a numerical and impersonal style (Vogt, 2007).

The archival research design was consistent with the problem, purpose, and research questions for the current study. The data to be analyzed were on file in the school records before the start of the study. The two possible values of the predictor variables, SCLE and MLRE, were preassigned to participants in a structured and formal environment. Ethical concerns, including privacy issues and the potential of unnecessary emotional and behavioral harm to the students, precluded the manipulation of group assignment for this study.

Participants

The samples for this study consisted of archival records, rather than live participants. Archival records represented 140 students (70 per group) in Grades 6, 7, and 8 diagnosed with an EBD. Data were gathered from two middle schools located within an urban school district in South Carolina. Both middle schools were represented equally among the 140 participants.

The sample used for this study was a purposive, nonprobability sample, rather than a sample selected with a randomized selection process. Subjects in a nonprobability sample are selected on the basis of their accessibility or by the purposive personal judgment of the researcher (Vogt, 2007). A post hoc power analysis was conducted to determine the actual power of the statistical tests conducted for this study (Faul, Erdfelder, Buchner, & Lang, 2009). For a two-tailed, independent-samples t test, a
medium effect size \( d = 0.5 \) was assumed, with an alpha significance level of .05 and a sample size of 140 (70 per group). The achieved power of the test was 83.6%.

In the selected school district, there were two schools with EBD programs. Students were eligible for the program if their place of residence was zoned for the middle school. The selected schools had similar demographics in terms of EBD classification and the number of students enrolled in the EBD program. In addition, the same assessments for both self-concept and academic achievement were used in both schools. Data were compared for the school year ending 2007, and 2005 data for the same students were used as baseline scores for comparison.

**Materials/Instruments**

The two testing instruments used for this study were the Piers-Harris 2 and the MAP. The Piers-Harris 2 was a measure of self-concept, and the MAP was a measure of the academic achievement of the participants. Following is a description of each of the instruments used.

**Piers-Harris 2.** The Piers-Harris Children’s Self-Concept Scale is one of the most widely used measures of psychological health among children and adolescents because the scale quickly identifies youngsters who need further testing or treatment in the clinical or educational setting (Manning, 2007). The Piers-Harris 2 was designed to assess the perceptions of children or adolescents regarding how they feel about themselves and how they examine their consideration of another person’s perspectives of themselves (Robinson, 2007). The Piers-Harris 2 is used as a screening and evaluation instrument of students with EBD in the selected school district. The scores for the local district are valid for 3 years.
The Piers-Harris 2 assesses self-concept in individuals aged 7 to 18 (Piers & Herzberg, 2002). The self-concept scale is composed of 60 items organized into six subscales: (a) physical appearance and attributes (11 items), (b) intellectual and school status (16 items), (c) happiness and satisfaction (10 items), (d) freedom from anxiety (14 items), (e) behavior adjustment (14 items), and (f) popularity (12 items). The total self-concept score are computed from 25 items related to positive self-concept, with a raw score in the range of 0 to 60 (Piers & Herzberg, 2002). Total self-concept ranges are: High (>60), Average (40 to 59), and Low (<39). The 25 items indicating positive self concept were selected from all six subscales. Examples of positive self concept responses are; “I am a happy person”, “I am smart”, and “I am a good person”.

Test items on the Piers-Harris 2 are simple descriptive statements, written at a second-grade reading level and requiring yes-or-no responses (Piers & Herzberg, 2002). The yes-or-no responses include 25 positively and 35 negatively phrased items presented as first-person declarative statements (Puckett, 2008). A total score ranges from 0 to 60 and reflects overall self-concept. A low range (less than 39) indicates an individual with serious doubts about his or her own self-worth (Piers & Herzberg, 2002). An average range (40 to 50) indicates a balanced acknowledgement of both negative and positive aspects of self. A high range (60 or above) indicates a strong general self-appraisal. The $T$ scores for the scale and all subscales were normed with a mean of 50 ($SD = 10$), with a normal range between 40 and 60 for the total score (Piers & Herzberg, 2002).

The basis for the reliability of the Piers-Harris 2 was a renormed test-retest for the norm groups of third, sixth, and tenth grade students. The test-retest was conducted with a nationally representative sample of 1,387 students aged 7 to 18, recruited from school
districts throughout the United States. The reliability scores were .72 for third grade, .71 for sixth grade, and .72 for tenth grade (Piers & Herzberg, 2002). The internal consistency of the Piers-Harris 2 was .91 for the total score and .74 to .81 for the six subdomain scores (Piers & Herzberg, 2002).

**Measure of Academic Progress (MAP).** The reliability of the MAP was based upon a test-retest and a type of parallel forms reliability. Traditionally, a span of 2 to 3 weeks has been used to separate the two test administrations. As a larger time spread of 6 to 8 weeks was used between tests for the current study, Pearson coefficients of reliability below .80 were not considered unreasonable (Northwest Evaluation Association, 2010). Pearson coefficients for test-retest reliability of the MAP ranged from .84 to .94, demonstrating the reliability of the MAP (Northwest Evaluation Association, 2010).

The MAP is a computer-based assessment system based on a Rausch Unit (RIT) scale that measures mathematics, reading, and language usage. A RIT scale is a curriculum scale based on the use of the difficulty values of individual items to estimate student achievement (Northwest Evaluation Association, 2010). The use of the RIT provides educators with better opportunities to address academic issues in a timely manner by relating the numbers on the RIT scale directly to the difficulty of items on the tests (Northwest Evaluation Association, 2010).

A RIT scale is a curriculum scale based on the use of individual item difficulty values to estimate student achievement (Northwest Evaluation Association, 2010). The RIT scale is also an equal interval scale, always showing consistent measurement (Cohen & Spenciner, 2007). For example, a student who improved from 165 to 170 shows the same amount of instructional growth as a student who improved from a 280 to 285.
Because the RIT score is consistent, it accurately measures the student’s growth over a period of time (Northwest Evaluation Association, 2010). RIT scores differ based upon the area of assessment.

The MAP was designed to adapt to the responses of the user as the user proceeded through the test. If a student answered a question correctly, the test presented a more challenging question. If the student missed the question, a simpler question followed (Northwest Evaluation Association, 2010). Test questions came from a growth research database built on accumulated test questions and answers that numbered over 4.5 billion over a 12-year period. To account for students who put forth little effort during the test, a monitoring system was built into the test to estimate the shortest potential completion time. If the student completed the test in less than the estimated time, the system would flag an error and not register the test results.

**Operational Definition of Variables**

The type of learning environment (SCLE vs. MLRE) was the grouping variable for this study. The outcome variables in this study were academic achievement and self-concept. Following are the operational definitions of variables used to answer the research questions in this study.

**Type of learning environment.** The type of learning environment was a categorical grouping variable with possible values of 0 (MLRE) or 1 (SCLE). The value of this variable was obtained from the archived student record and represented the type of class to which the student was assigned.

**Academic achievement.** Academic achievement was the outcome variable for Research Question 1. For this study, academic achievement was measured with the
combined MAP scores for mathematics, reading, and language arts. MAP scores were
determined with an RIT scale, a curriculum scale based on the use of individual item
difficulty values to estimate student achievement (Northwest Evaluation Association,
2010). As an RIT score, the MAP is measured as an interval variable (Northwest

**Self-concept.** Self-concept was the outcome variable for Research Question 2 in
this study. Self-concept was measured with the student scores on the Piers-Harris 2. The
Piers-Harris 2 scale consisted of six subscales: (a) physical appearance and attributes,
(b) intellectual and school status, (c) happiness and satisfaction, (d) freedom from
anxiety, (e) behavior adjustment, and (f) popularity. An overall self-concept score was
computed from 25 items related to positive self-concept, with a raw score in the range of
0 to 60 (Piers & Herzberg, 2002). Test items were simple descriptive statements, written
at a second-grade reading level and requiring yes-or-no responses (Piers & Herzberg,
2002). Students provided yes or no responses to 25 positively phrased and 35 negatively
phrased items, all presented as first-person declarative statements (Puckett, 2008). A
total score reflected an overall self-concept, and subscale scores allowed for more
detailed explanations. Possible values ranged from 0 to 60 (Butler & Gasson, 2006). The
scores produced by the Piers-Harris 2 were percentiles, stanines, and t scores. T scores
($M = 50, SD =10$) were used for calculating the total score and domain scale scores. The
normal range of the $T$ score was between 40 and 60 (Piers & Herzberg, 2002). Self-
concept is an ordinal variable but can be measured as an interval variable if distributions
are normal and variances are equal (Cohen & Swerdlik, 2009).
Data Collection, Processing, and Analysis

Before the study began, permission was obtained from the Institutional Review Board (IRB) of Northcentral University to conduct the study. All data for this study were taken from archived, longitudinal student records for the school years 2005 and 2007. Scores from 2005 data were used as baseline measures.

All students were tested on designated district test days. Data were automatically stored into the Northwest Network Test Environment (NTE) server, the secure server of the Northwest Evaluation Association. Piers-Harris 2 scores came from the initial student evaluations at the beginning of the school year. MAP scores were gathered each year in September and March after self-concept assessments were complete. All selected records represented the information on file for middle school students with EBD, placed in either a SCLE or a MLRE. Archival data for Piers-Harris 2 scores were derived from records securely stored in a locked data room at the Exceptional Education Department of the selected school district. Archival data for MAP scores were downloaded from the NTE server. Secure testing applications were used to transfer data to the NTE server for exclusive use originating from the client’s workstation (Northwest Evaluation Association, 2010). Testing information was available only to selected teachers and district personnel with access through a specified user name and password provided by Northwest Evaluation Association (2010).

Permission was obtained from Western Psychological Services (2011) to use the Piers-Harris 2 for data collection purposes for this study (see Appendix B). Representatives of the Exceptional Education Department granted permission to review data stored in the secured data room and to photocopy the test results for the Piers-Harris
2. Thirteen visits to the data room were needed. A special-education assistance then entered the data from the Piers-Harris 2 into a Microsoft Excel spreadsheet within 2 weeks.

Permission was granted to conduct research using MAP data and to conduct the research in the school district (see Appendix C). Archival data for MAP scores were requested from the district research specialist for the Northwest Network Test Environment (NTE) server. Within 2 weeks, all MAP data needed for the study were downloaded in the form of a pdf file. The data were then entered manually into a Microsoft Excel spreadsheet. All study data were imported to SPSS (version 19.0) statistical software and coded, processed, and analyzed. All data collection was inconspicuous to participants and caused no additional stress.

All between-group results were confirmed with independent samples $t$ tests for both 2005 and 2007 scores. Split-plot analyses of variance (ANOVA), also termed SPANOVA, were used to compare the two learning environments (MLRE and SCLE) in terms of within-group, longitudinal changes and Year x Class Type interactions. However, the research questions were addressed in terms of between-group main effects for 2007, with 2005 scores used for baseline comparisons.

**Methodological Assumptions, Limitations, and Delimitations**

In this study, it was assumed that the foundation of the study was sound. The methodology was assumed to be appropriate to the research problem and purpose. The students who completed the assessments were assumed to be truthful in their answers to questions about self-concept and were assumed to have made their best efforts during the assessments of academic achievement.
Limitations. The study had several limitations. The first limitation involved the teaching of students with an EBD. Educating students with an EBD is a challenging task under the best conditions (Chisolm, 2008). Given the varied and demanding emotional and behavioral needs of the students, the daily task of the classroom teacher is primarily to manage the behavioral problems and the classroom environment, resulting in an insufficient amount of time for academic subjects (Hallahan et al., 2011). The emotional and behavioral states of the students during the administration of the tests used for this study were not predictable.

The records were selected as a nonprobability sample. The results could not be generalized beyond the sixth, seventh, and eighth grades of the two middle schools of the selected school district. The learning environments examined in this study could not be replicated in other environments. The academic, emotional and behavioral supports used in the selected schools exceeded the basic federal requirements for teaching students with emotional and behavioral disorders (South Carolina Department of Education, 2007). Students in the SCLE are known to have lower academic achievement and more severe behavioral problems than their peers educated in the MLRE have (Katsiyannis et al., 2011; Lane et al., 2008). Therefore, scores from 2005 data were compared, using independent samples t tests, to provide a baseline for the between-group comparison of 2007 scores.

The results may have been affected by personnel changes over the 3-year span of the study (school years 2004-2005, 2005-2006, and 2006-2007). However, personnel changes affecting students in this study were minor. Both the special education teacher and special education assistant for the SCLE group remained with the students between
2004 and 2007. For the MLRE, the special education teacher remained with the students for the 3 years, but the special education assistant was replaced during the 2005-2006 school year.

Test revisions in the instruments also occurred but are believed to be minor. No major test revisions or renorming of either the MAP or the Piers-Harris 2 took place between 2005 and 2007. However, representatives of the Northwest Evaluation Association reviewed the MAP each year to verify alignment with the curriculum. The reevaluation was designed to ensure that MAP testing reflected current state and national academic requirements (Northwest Evaluation Association, 2010).

The self-reported nature of the assessments was a limitation of this study. Students may have rushed through the test or may not have answered the questions truthfully. Students may have misunderstood test questions. The possible limitation of rushing through the test was mitigated in the case of academic achievement scores. The MAP was familiar to students and had a built-in timer to monitor time use. If a student rushed through the test without making the effort to answer questions accurately, the test would not register the score (Northwest Evaluation Association, 2010).

**Delimitations.** The study was delimited in several ways. Only two schools were selected for examination, and both schools were located in the same South Carolina school district. Only middle schools were evaluated, with all scores coming from students in the sixth, seventh, and eighth grades. Three school years were included in the study, beginning with the school year 2005.
Ethical Assurances

Before the study began, permission was obtained from the IRB of Northcentral University to conduct the study. Consent to conduct the study was also granted from the research department of the local school district. The research followed all ethical standards involving the dignity, rights, and welfare of the individual as prescribed by federal regulations involving human subjects (U.S. Department of Health and Human Services, 2008).

Because the data were archival and individual records were not identified, informed consent from the students and their guardians was not needed, and there was no risk of harm to individual participants. Data collection was inconspicuous and did not add stress to participants. Thus, there was no risk of harm. The confidentiality of the data was protected by storing all data materials in a locked file cabinet. Student anonymity was protected by ensuring that identifying information was stripped from all records before data were transferred for analysis. All information not directly related to the statistical analyses in the study was deleted. Because the data for the study were drawn from archived records, my dual role as the researcher and an employee in public middle school education in the selected school district did not present a risk of conflict of interest. A letter of informed consent was sent to the school professionals and clearly detailed the safeguards used for the study (see Appendix D).

Summary

The problem addressed in this study was that research concerning the placement of students with an EBD has been conflicting and insufficient (Rutherford et al., 2007). Students with EBD have been compared primarily to nondisabled peers (Vannest,
Temple-Harvey, & Mason, 2009). In studies in which SCLE and MLRE have been compared for this population, learning environments have been inadequate, and there has been a shortage of qualified personnel adequately equipped to cope with the students (Kauffman, 2003, 2008; Nelson, 2003).

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (in mathematics, reading, and language usage) and self-concept (in terms of physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, popularity, and overall concept scores). Data were gathered from archived records in two middle schools located within an urban school district in South Carolina. Records represented 140 middle school students (70 per group) in Grades 6, 7, and 8, diagnosed with an EBD. Baseline data were recorded for 2005, and the data for 2007 were used for between-group comparisons. Academic achievement was measured with the MAP (Northwest Evaluation Association, 2010), and self-concept was measured with the Piers-Harris 2 (Piers & Herzberg, 2002).

Scores for academic achievement had a strongly normal distribution and equal variances. The distributions for total self-concept were sufficiently normal to permit the use of parametric statistics. Independent-samples t tests and SPANOVAs were used to compare the two learning environments (MLRE and SCLE) in terms of academic achievement and self-concept scores for 2005 and 2007. Within-group differences and
Year x Group interactions were also reported. However, the research questions were addressed in terms of group main effects for 2007, with 2005 scores used for baseline comparisons.
Chapter 4: Findings

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an emotional and behavioral disorder (EBD) based on the type of learning environment in which they were placed (self-contained learning environment [SCLE] vs. mainstream least restrictive environment [MLRE]). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (as a composite score of mathematics, reading, and language usage) and self-concept (in terms of the overall score for physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity).

Data were gathered from archived records in two middle schools located within an urban school district in South Carolina. Records represented 140 middle school students (70 per group) in Grades 6, 7 and 8, diagnosed with EBD. Data were gathered for the 2007 school year, with 2005 data for the same students serving as baseline comparisons. Academic achievement was measured with the Measure of Academic Progress (MAP), a computer-adaptive assessment of skills in mathematics, reading, and language usage. Self-concept was measured as a composite of the six subscales of the Piers-Harris 2 (Piers & Herzberg, 2002).

The results of the study are presented in this chapter. For each research question, descriptive data are presented, followed by the results of the data analyses. The chapter concludes with an evaluation of the findings and a summary.
Results

To determine whether the total self-concept score and academic achievement score were normally distributed, P-P plots were generated. For academic achievement, distributions were strongly normal. For total self-concept, the residuals showed a minimal departure from normality, but having at least 30 participants in an independent samples t test makes the test robust against minor violations of normality (Pallant, 2010). Parametric statistics were therefore used to analyze both research questions. Levene’s test showed that variances were equal for academic achievement scores but not for total self-concept scores. However, the results of the independent samples t tests for total self-concept were unchanged when equal variances were not assumed. An alpha level of .05 was set for all hypotheses tests.

Following is a restatement of Research Question 1, together with associated null and alternative hypotheses and the results of the analysis.

Research Question 1. To what extent, if any, is there a difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?

H10. There is no significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

H1a. There is a significant difference in academic achievement, as measured with the MAP, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.
Independent-samples *t* tests were performed to compute the differences in academic achievement scores based on the learning environment (MLRE vs. SCLE) for 2007. The results are reported in Table 1. Composite scores for academic achievement in 2007 were significantly different for the two groups, *t*(138) = 2.65, *p* = .009, with the MLRE group having a higher mean score. The null hypothesis H1₀ was rejected, and there was support for the alternative hypothesis H1ₐ. The composite mean score was also higher in 2007 for the MLRE group in mathematics, *t*(138) = 1.68, *p* = .008, and in language arts, *t*(138) = 2.16, *p* = .03. There were no significant differences in baseline scores for 2005 for any academic measures.

Table 1

*Academic Test Scores, Between-Group Differences*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Year</th>
<th>Mean difference</th>
<th><em>t</em> (138)</th>
<th><em>p</em></th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>2005</td>
<td>3.34</td>
<td>1.30</td>
<td>.20</td>
<td>[-1.73, 8.42]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>5.93</td>
<td>1.68</td>
<td>&lt;.01</td>
<td>[1.55, 10.30]</td>
</tr>
<tr>
<td>Reading</td>
<td>2005</td>
<td>1.60</td>
<td>0.54</td>
<td>.59</td>
<td>[-4.21, 7.41]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>3.37</td>
<td>1.40</td>
<td>.16</td>
<td>[-1.40, 8.14]</td>
</tr>
<tr>
<td>Language arts</td>
<td>2005</td>
<td>3.74</td>
<td>1.47</td>
<td>.14</td>
<td>[-1.30, 8.78]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>4.91</td>
<td>2.16</td>
<td>.03</td>
<td>[0.41, 9.42]</td>
</tr>
<tr>
<td>Composite score</td>
<td>2005</td>
<td>8.69</td>
<td>1.39</td>
<td>.17</td>
<td>[-3.37, 21.04]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>14.21</td>
<td>2.65</td>
<td>&lt;.01</td>
<td>[3.61, 24.82]</td>
</tr>
</tbody>
</table>

*Note.* *n* = 140. CI = confidence interval.

Split-plot analyses of variance (ANOVA), also termed SPANOVAs, were performed to evaluate within-group longitudinal differences and Year x Class Type
interactions for academic achievement scores. All within-group differences were significant, indicating improvement in all academic achievement scores between 2005 and 2007. Table 2 shows the within-group differences for academic achievement for the MLRE, and Table 3 shows the differences for the SCLE. The differences in composite academic scores for the Year x Class Type interaction were not significant, Wilks’ Lambda = .98, $F(1, 138) = 3.46, p = .06$. 
### Table 2

*Academic Test Scores, Within-Group Longitudinal Comparisons, Mainstream Least Restricted Environment*

<table>
<thead>
<tr>
<th>Measure</th>
<th>2005</th>
<th>2007</th>
<th>Difference</th>
<th>t(69)</th>
<th>p</th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>190.51</td>
<td>199.64</td>
<td>9.13 (8.42)</td>
<td>9.07</td>
<td>&lt; .001</td>
<td>[7.12, 11.14]</td>
</tr>
<tr>
<td>(16.03)</td>
<td>(14.07)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>186.66</td>
<td>194.40</td>
<td>7.74 (9.66)</td>
<td>6.70</td>
<td>&lt; .001</td>
<td>[5.44, 10.05]</td>
</tr>
<tr>
<td>(18.91)</td>
<td>(15.45)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language arts</td>
<td>191.50</td>
<td>199.40</td>
<td>7.90 (7.34)</td>
<td>9.00</td>
<td>&lt; .001</td>
<td>[6.15, 9.65]</td>
</tr>
<tr>
<td>(16.22)</td>
<td>(14.79)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite score</td>
<td>568.67</td>
<td>593.44</td>
<td>24.77 (15.15)</td>
<td>13.68</td>
<td>&lt; .001</td>
<td>[21.16, 28.38]</td>
</tr>
<tr>
<td>(38.67)</td>
<td>(34.67)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. n = 70. CI = confidence interval.*
Table 3

*Academic Test Scores, Within-Group Longitudinal Comparisons, Self-Contained Learning Environment*

<table>
<thead>
<tr>
<th>Measure</th>
<th>2005 M (SD)</th>
<th>2007 M (SD)</th>
<th>Difference M (SD)</th>
<th>t(69)</th>
<th>p</th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>118.17 (14.30)</td>
<td>193.71 (12.04)</td>
<td>6.54 (11.07)</td>
<td>4.95</td>
<td>&lt; .001</td>
<td>[3.90, 9.18]</td>
</tr>
<tr>
<td>Reading</td>
<td>185.06 (15.71)</td>
<td>191.03 (12.97)</td>
<td>5.97 (10.86)</td>
<td>4.60</td>
<td>&lt; .001</td>
<td>[3.38, 8.56]</td>
</tr>
<tr>
<td>Language arts</td>
<td>187.76 (13.87)</td>
<td>194.49 (12.01)</td>
<td>6.73 (7.82)</td>
<td>7.20</td>
<td>&lt; .001</td>
<td>[4.86, 8.59]</td>
</tr>
<tr>
<td>Composite score</td>
<td>559.99 (35.16)</td>
<td>579.23 (28.47)</td>
<td>19.24 (19.73)</td>
<td>8.16</td>
<td>&lt; .001</td>
<td>[14.54, 23.95]</td>
</tr>
</tbody>
</table>

*Note.* n = 70. CI = confidence interval.

Following is a restatement of Research Question 2, together with associated null and alternative hypotheses and the results of the analysis.

**Q2.** To what extent, if any, is there a difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD?

**H20.** There is no significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.
H2a. There is a significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

Independent-samples t tests were performed to compute the differences in self-concept scores based on the learning environment (MLRE vs. SCLE) for 2007. The results are reported in Table 4. Among middle school students with an EBD, there was no significant difference in overall mean self-concept scores between MLRE students and SCLE students, t(138) = 0.57, p = .57. The null hypothesis H2_0 was not rejected, and the alternative hypothesis H2_a was not supported. There were no significant differences in scores for any of the self-concept subscales for 2007. The only significant difference in baseline scores for 2005 was for freedom from anxiety, t(138) = 2.01, p = .046.
Table 4  

*Self-Concept Scores, Between-Group Differences*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Year</th>
<th>Mean difference</th>
<th>( t ) (138)</th>
<th>( p )</th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral adjustment</td>
<td>2005</td>
<td>0.41</td>
<td>0.31</td>
<td>.76</td>
<td>[-2.24, 3.07]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.33</td>
<td>0.85</td>
<td>.40</td>
<td>[-1.76, 4.42]</td>
</tr>
<tr>
<td>Intellectual and school status</td>
<td>2005</td>
<td>0.40</td>
<td>0.25</td>
<td>.81</td>
<td>[-2.81, 3.61]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.21</td>
<td>0.75</td>
<td>.45</td>
<td>[-1.98, 4.41]</td>
</tr>
<tr>
<td>Physical appearance and attributes</td>
<td>2005</td>
<td>-0.34</td>
<td>-0.17</td>
<td>.87</td>
<td>[-4.34, 3.66]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.23</td>
<td>0.60</td>
<td>.55</td>
<td>[-2.81, 5.27]</td>
</tr>
<tr>
<td>Freedom from anxiety</td>
<td>2005</td>
<td>2.94</td>
<td>2.01</td>
<td>&lt;.05</td>
<td>[0.47, 5.84]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>2.46</td>
<td>1.76</td>
<td>.08</td>
<td>[-0.30, 5.22]</td>
</tr>
<tr>
<td>Popularity</td>
<td>2005</td>
<td>-0.50</td>
<td>-0.27</td>
<td>.78</td>
<td>[-4.12, 3.12]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>0.47</td>
<td>0.23</td>
<td>.82</td>
<td>[-3.54, 4.48]</td>
</tr>
<tr>
<td>Happiness and satisfaction</td>
<td>2005</td>
<td>-0.23</td>
<td>-0.15</td>
<td>.88</td>
<td>[-3.16, 2.70]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.04</td>
<td>0.68</td>
<td>.50</td>
<td>[-1.98, 4.07]</td>
</tr>
<tr>
<td>Overall score</td>
<td>2005</td>
<td>-0.67</td>
<td>-0.44</td>
<td>.66</td>
<td>[-3.76, 2.39]</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>0.77</td>
<td>0.57</td>
<td>.57</td>
<td>[-1.90, 3.45]</td>
</tr>
</tbody>
</table>

*Note. n = 140. CI = confidence interval.*

SPANOVAs were performed to evaluate within-group longitudinal differences and Year x Class Type interactions for self-concept scores. All within-group differences were significant, \( p < .01 \), indicating improvement in all self-concept scores between 2005 and 2007. Table 5 shows the within-group differences for self-concept for the MLRE, and Table 6 shows the differences for the SCLE. The differences in overall self-concept
scores for the Year x Class Type interaction were not significant, Wilks’ Lambda = .99, $F (1, 138) = 1.04, p = .31$.

Table 5

**Self-Concept Test Scores, Within-Group Longitudinal Comparisons, Mainstream Least Restricted Environment**

<table>
<thead>
<tr>
<th>Measure</th>
<th>2005 (SD)</th>
<th>2007 (SD)</th>
<th>Difference (SD)</th>
<th>$t$ (69)</th>
<th>$p$</th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral adjustment</td>
<td>42.03 (8.53)</td>
<td>46.61 (9.58)</td>
<td>4.59 (7.79)</td>
<td>4.92</td>
<td>&lt; .001</td>
<td>[2.73, 6.44]</td>
</tr>
<tr>
<td>Intellectual and school status</td>
<td>40.11 (10.07)</td>
<td>44.96 (9.32)</td>
<td>4.84 (7.50)</td>
<td>5.40</td>
<td>&lt; .001</td>
<td>[3.05, 6.63]</td>
</tr>
<tr>
<td>Physical appearance and attributes</td>
<td>43.10 (12.94)</td>
<td>49.56 (13.03)</td>
<td>6.46 (10.47)</td>
<td>5.16</td>
<td>&lt; .001</td>
<td>[3.96, 8.95]</td>
</tr>
<tr>
<td>Freedom from anxiety</td>
<td>47.13 (8.42)</td>
<td>50.83 (8.28)</td>
<td>3.70 (11.36)</td>
<td>2.73</td>
<td>.008</td>
<td>[0.99, 6.41]</td>
</tr>
<tr>
<td>Popularity</td>
<td>40.49 (11.59)</td>
<td>46.21 (12.68)</td>
<td>5.73 (10.57)</td>
<td>4.54</td>
<td>&lt; .001</td>
<td>[3.21, 8.25]</td>
</tr>
<tr>
<td>Happiness and satisfaction</td>
<td>40.46 (9.00)</td>
<td>45.11 (9.65)</td>
<td>4.66 (7.27)</td>
<td>5.36</td>
<td>&lt; .001</td>
<td>[2.92, 6.39]</td>
</tr>
<tr>
<td>Overall score</td>
<td>41.04 (9.78)</td>
<td>49.37 (8.77)</td>
<td>8.33 (9.16)</td>
<td>7.61</td>
<td>&lt; .001</td>
<td>[6.14, 10.51]</td>
</tr>
</tbody>
</table>

*Note. n = 70. CI = confidence interval.*
### Table 6

**Self-Concept Test Scores, Within-Group Longitudinal Comparisons, Self-Contained Learning Environment**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure 2005</th>
<th>Measure 2007</th>
<th>Difference</th>
<th>t (df)</th>
<th>p</th>
<th>95% CI of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral adjustment</td>
<td>41.61 (7.34)</td>
<td>45.29 (8.93)</td>
<td>3.67 (8.17)</td>
<td>3.76</td>
<td>&lt; .001</td>
<td>[1.72, 5.62]</td>
</tr>
<tr>
<td>Intellectual and school status</td>
<td>39.71 (9.12)</td>
<td>43.74 (9.78)</td>
<td>4.03 (8.80)</td>
<td>3.83</td>
<td>&lt; .001</td>
<td>[1.93, 6.13]</td>
</tr>
<tr>
<td>Physical appearance and attributes</td>
<td>43.44 (10.91)</td>
<td>48.33 (11.05)</td>
<td>4.89 (10.30)</td>
<td>3.97</td>
<td>&lt; .001</td>
<td>[2.43, 7.34]</td>
</tr>
<tr>
<td>Freedom from anxiety</td>
<td>44.19 (8.90)</td>
<td>48.37 (8.23)</td>
<td>4.19 (11.41)</td>
<td>3.07</td>
<td>.003</td>
<td>[1.46, 6.91]</td>
</tr>
<tr>
<td>Popularity</td>
<td>40.99 (10.05)</td>
<td>45.74 (11.24)</td>
<td>4.76 (9.79)</td>
<td>4.07</td>
<td>&lt; .001</td>
<td>[2.42, 7.09]</td>
</tr>
<tr>
<td>Happiness and satisfaction</td>
<td>40.69 (8.53)</td>
<td>44.07 (8.41)</td>
<td>3.39 (8.20)</td>
<td>3.45</td>
<td>.001</td>
<td>[1.43, 5.34]</td>
</tr>
<tr>
<td>Overall score</td>
<td>41.73 (8.56)</td>
<td>48.60 (7.15)</td>
<td>6.87 (7.64)</td>
<td>7.53</td>
<td>&lt; .001</td>
<td>[5.05, 8.69]</td>
</tr>
</tbody>
</table>

*Note. n = 70. CI = confidence interval.*

**Evaluation of Findings**

This quantitative study was an investigation of academic achievement and self-concept scores for two groups of students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). The academic, emotional, and behavioral supports in these environments had been designed to exceed by far the basic federal requirements for teaching students with EBDs (Prather-Jones, 2011; South
Carolina Department of Education, 2007). In this section, the findings of the study are evaluated.

**Academic achievement.** The findings of this study showed that when group main effects were examined, the composite academic score for 2007 was significantly higher for the MLRE group than for the SCLE group, $p = .009$. When examined in terms of the separate components (mathematics, reading, and language arts), scores for mathematics and language arts were significantly higher in 2007 for the MLRE group as well. No baseline between-group differences were significant. Within-group analyses showed that all academic scores improved between 2005 and 2007 for both groups, $p < .001$. These findings were in contrast to previous literature, according to which there is a lack of improvement in academic achievement for this population (Mattison, 2011).

The MLRE group generally consisted of students with less severe emotional and behavioral problems compared to the SCLE group (Kaufman et al., 2008). Thus, one interpretation of the findings is that students in the MLRE group may have focused more on academic issues than the other students did, and academic scores may have been higher as a result. In previous research, findings regarding academic achievement and self-concept among students with an EBD have been mixed (Wiley, Siperstein, Forness, & Brigham, 2010). Students in both MLREs and SCLEs have demonstrated broad academic and social deficits (Gage et al., 2010). Overall, these individuals have unstable and inconsistent academic and social outcomes (Rutherford et al., 2007). A cross-sectional study of kindergarten through 12th grade students with an EBD (Nelson, 2004) showed that achievement deficits were higher and more pronounced among adolescents than among the younger children.
Studies of students with an EBD have consistently shown little to no improvement over time in academic functioning (Wiley et al., 2010). Students with an EBD did not improve in academic skills over the course of an academic year, regardless of the type of learning environment (Mattison, 2011). In some cases, the students fell farther behind in the academic, social, and behavioral domains (Trout et al., 2008). However, in this study, within-group longitudinal improvements were found for all academic scores.

Although prior research is consistent regarding a lack of improvement for students with an EBD, the nature and extent of the problem has varied among different studies (Lane et al., 2008). In terms of academic achievement, findings differ regarding whether deficits in different subject areas remain stable or worsen over time. Over a 7-year period, the percentage of students in this population reading below grade level increased, whereas the percentage performing below grade level in mathematics remained constant (Mattison, 2011). A cross-sectional study of students with an EBD in kindergarten through 12th grade (Nelson et al., 2004) demonstrated no significant growth in reading or written language over time, and deficits in mathematics increased. A meta-analysis of academic achievement among students with an EBD (Reid et al., 2004) showed no differences by age in any subject area, suggesting that academic deficits remained stable over time.

The wide variability in academic progress among students with severe deficits in academic achievement may be related to the contextual differences in the types of learning environments in which students with an EBD are educated (Carr-George et al., 2009; Wiley et al., 2010). In national longitudinal studies, environments for students with an EBD in particular have been found to be significantly underresourced (Wiley et
al., 2010). Data from two nationally representative samples showed that students with an EBD spent less time in general education classrooms, were likely to have teachers who felt unprepared to work with them, and were unlikely to receive needed academic or mental health supports (Carr-George et al., 2010). In contrast to previous research, the environment examined in this study was marked by an unusually high level of professional expertise. These differences in quality may explain both the longitudinal improvements for both groups and the between-group differences, neither of which were found in other studies.

**Self-concept.** There were no significant between-group differences in self-concept scores except for the baseline difference in freedom from anxiety, $p = .046$. However, self-concept did improve between 2005 and 2007 for all aspects studied, $p < .01$. This finding was in contrast to other studies (Parker, 2010; Rutherford et al., 2007) that showed no improvement of self-concept over time for students with EBD. The finding of within-group longitudinal differences has contributed to the broken glass theory. The results showed that a special-needs program marked by an unusually high level of expertise was able to create improvement in the self-concept of adolescents with an EBD.

According to theories of self-concept, attributes of self-concept include control; acceptance; responsibility; and an understanding of self in terms of social characteristics or abilities, physical appearance, body image, and inner thinking (Bandura, 1997; Bandura et al., 2001; Hadley et al., 2008). In the current study, there was not a significant difference in self-concept scores between the two groups (SCLE vs. MLRE). Because many students with an EBD lack social competence and display erratic
behaviors, some researchers (e.g., Parker, 2010) have assumed that members of this population perform better socially and have higher levels of self-concept in more restrictive learning environments. However, the findings of the current study confirm the notion, suggested by other researchers (Webber & Plotts, 2008), that many students with EBD do not engage in enough positive social interaction with peers to improve positive perceptions of the self.

Overall self-concept scores for both the MLRE and SCLE groups in this study were in the low-average range for the instrument used (Piers & Herzberg, 2012). Scores in the average range usually represent a balanced self-evaluation, with acknowledgement of both positive and negative aspects of the self (Piers & Herzberg, 2009). A low-average range indicates that on the balance, the self-evaluation of the participants was negative (Piers & Herzberg, 2009).

Students with an EBD typically exhibit lower levels of self-concept than the norm (Montague et al., 2007; Wiley et al., 2010). Students with an EBD would be predicted to have low levels of self-concept. These students typically perceive neutral social interactions as being hostile or negative (Robinson, 2007). A study of self-concept trajectories of students with an EBD (Wei et al., 2012) showed lower levels of social self-concept and self-image compared to students with other disabilities (Wei et al., 2012).

**Contribution to knowledge.** The comparison of data from students with an EBD from two different settings in this study was a contribution to knowledge. Researchers have primarily compared students with an EBD to nondisabled peers (Rutherford et al., 2007; Vannest et al., 2009). Thus, standards for success are based upon the achievements of students without disabilities (Rutherford et al., 2007). Limited attention has been
given to comparing students with an EBD with other students from this population in different learning environments to determine the best environment for success (Kaufman et al., 2008).

In comparisons of students with an EBD with other disabled peers, the educators in the learning environments were not prepared to handle the various emotional and behavioral needs of this population (Prather-Jones, 2011). In contrast, the academic, emotional, and behavioral support from highly qualified personnel for the students in this study was exceptional in the field of special education. The school district in which the research occurred offered two types of learning environments for middle school students with an EBD. The two special education teachers who taught the two groups were highly qualified mental-health professionals certified in teaching students with an EBD. The special education teacher who taught the SCLE was a trained cognitive behavioral therapist, and the special education teacher who taught in the MLRE was a Licensed Master Social Worker. The special education teachers also had instructional aides who were highly qualified and trained in handling students with an EBD. Thus, both programs were staffed by highly qualified personnel equipped to handle the erratic and negative behaviors of this population. This high level of expertise may be the most appropriate interpretation of the differences between these findings and the findings of previous studies. In contrast to findings from previous research, all mean scores improved within a 2-year time span.

The findings of this study are a contribution to the broken glass theory (Chisolm, 2008). According to the theory, the teacher can develop and implement techniques to foster cognitive-behavioral skills (Chisolm, 2008). These skills are needed to manage the
learning environment and various emotional and behavioral issues more effectively so as to focus on the academic task at hand. By fostering these skills, highly expert professionals may have been responsible for ensuring that students improved both in academic achievement and in self-concept. Teachers were able to assist and work with the EBD students to develop cognitive-behavioral skills that focused on social, emotional, and behavioral strategies. These strategies may have assisted the students in being able to cope with stressful or negative situations by employing short-term strategies to stop and focus on their reactions to a situation. By stopping and focusing, the student can gain a better understanding of how thoughts, emotions, and behaviors are connected and affect one another. Students with an EBD may have been more able to manage their own actions in different learning environments, leading to more favorable academic outcomes.

The results of this study showed that after 2 years in positive learning environments, the students in the MLRE had scores that were significantly higher for academic achievement, compared to the students in the SCLE. Researchers and educators remain ambivalent regarding the inclusion of this population in general education classrooms, and opposition is firm in some cases (Hallahan et al., 2011; Rutherford et al., 2007). Some empirical research has shown that inclusive classrooms exacerbate the issues with different learning styles and various emotional and behavioral problems of these children (Prather-Jones, 2011; Rutherford et al., 2007). Writers who have been hesitant to support inclusive classrooms have argued that academic goals for this population should parallel the goals set for nondisabled peers (Hallahan et al., 2011) and that students with EBDs can learn appropriate social interaction and academic
learning from peers in the inclusive classrooms (Prather-Jones, 2011). The findings in this study support the benefits of inclusive classrooms under the conditions of a highly expert learning environment.

**Summary**

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The MAP (Northwest Evaluation Association, 2012) was used to measure academic achievement, and the Piers-Harris 2 (Piers & Herzberg, 2009) was used to measure self-concept.

Academic achievement was measured with the MAP as a composite of the mathematics, reading, and language arts scores for each record. The results showed that the MLRE group had higher scores in academic achievement than did the SCLE students for 2007, \( p = .009 \). Baseline differences were not significant. The null hypothesis \( H_{10} \) was rejected. All within-group scores in academic achievement showed improvements over time between 2005 and 2007.

Self-concept scores were obtained from the Piers-Harris 2. Self-concept was measured by a total score as well as subscales designed to measure (a) physical appearance and attributes, (b) intellectual and school status, (c) happiness and satisfaction, (d) freedom from anxiety, (e) behavior adjustment, and (f) popularity. The difference between the MLRE group and the SCLE group for 2007 was not significant for the overall self-concept score, \( p = .57 \). The null hypothesis \( H_{20} \) was not rejected. All
within-group scores for self-concept showed improvements over time between 2005 and 2007.

The MLRE group tended to include students whose emotional and behavioral problems were less severe, in comparison to the students in the SCLE group. The students in the MLRE group may have used their time in school focusing more on academic issues, thereby earning higher academic scores. Both learning environments were staffed by highly qualified personnel and offered exceptional levels of academic, emotional, and behavioral support. The two special education teachers who taught the two groups were highly qualified mental-health professionals certified in teaching students with an EBD. The special education teachers also had instructional aides who were highly qualified and trained in handling students with an EBD.

The findings of this study contrasted with the findings of previous research. Previous studies of differences between MLRE and SCLE groups have shown mixed results. Previous longitudinal studies have shown that students with an EBD did not show academic improvement over time. The most appropriate interpretation of the findings of this study is that differences and improvements can be attributed to the exceptionally high level of skill and expertise found in the selected environment. Thus, the findings of this study represent an important contribution to knowledge regarding the education of students with an EBD.
Chapter 5: Implications, Recommendations, and Conclusions

Students with an emotional and behavioral disorder (EBD) continue to have more academic and behavioral problems compared to students with other disabilities. Academic achievement and self-concept are affected when students are unable to negotiate social demands, perform academic tasks, and meet expectations (Lane et al., 2008; Lane, Givner, & Pierson, 2006; Mooney et al., 2006). There continues to be a shortage of personnel qualified to address the individual needs of these students, and poor services or no services are found (Nelson, 2003; Prather-Jones, 2011). This population is likely to continue to have low levels of academic achievement and negative self-concept issues, along with mental health problems, if needs are not met (Nelson, 2003; Prather-Jones, 2011).

Students with an EBD were the least successful when placed into a mainstream least restricted environment (MLRE) with their nondisabled peers (Sciarra, 2011). However, the reason for this lack of success may have been a shortage of qualified personnel and learning environments adequately equipped to cope with this population (Kauffman, 2003, 2008; Nelson, 2003). Students with an EBD in the MLRE may be exposed to parallel academic goals and learning environments from which children can learn age-appropriate behaviors from nondisabled peers (Hallahan et al., 2011).

The problem addressed in this study was that research concerning the placement of students with an EBD has been conflicting and insufficient (Rutherford et al., 2007). Students with EBD have been compared primarily to nondisabled peers (Vannest, Temple-Harvey, & Mason, 2009). In studies in which self-contained learning environments (SCLE) and MLREs have been compared for this population, learning
environments have been inadequate, and there has been a shortage of qualified personnel adequately equipped to cope with the students (Kauffman, 2003, 2008; Nelson, 2003). There has been a need to conduct these comparisons in learning environments that provided the greatest chance for academic achievement and increases in self-concept (Prather-Jones, 2011; Sciarra, 2011).

The purpose of this quantitative, archival study was to investigate differences in academic achievement and self-concept scores among students with an EBD based on the type of learning environment in which they were placed (SCLE vs. MLRE). A secondary data analysis was used. The grouping variable was the type of learning environment (SCLE vs. MLRE). The outcome variables were academic achievement (in mathematics, reading, and language usage) and self-concept (in terms of the overall score for physical appearance and attributes, intellectual and school status, happiness and satisfaction, freedom from anxiety, behavior adjustment, and popularity). Data were gathered from archived records in two middle schools located within an urban school district in South Carolina. Records represented the scores of 140 middle school students (70 per group) in Grades 6, 7, and 8, diagnosed with an EBD. Data were gathered for the 2007 school year, with 2005 data for the same students serving as baseline comparisons. Academic achievement was measured with the Measure of Academic Progress (MAP), a computer-adaptive assessment of skills in mathematics, reading, and language usage. Self-concept was measured as a composite of the six subscales of the Piers-Harris 2 (Piers & Herzberg, 2002).

Limitations. The scope of this study was limited to archival records of students with an EBD in Grades 6, 7, and 8 located in two middle schools in an urban school
district in South Carolina. The findings could not be generalized beyond these two
schools. In fact, a claim of this study is that the learning environments were exceptional
in the field because of the unusually high level of expertise of the professional staff in the
selected schools. The academic, emotional, and behavioral supports in these
environments had been designed to exceed by far the basic federal requirements for
teaching students with EBDs (Prather-Jones, 2011; South Carolina Department of
Education, 2007). Thus, the findings of the study may not be replicable. Rather than
being generalizable, the results point to the uniqueness of the findings.

Because of the emotional, behavioral, and instructional needs of this population,
the daily tasks of the SCLE classroom teacher were primarily to manage the behavior
problems and classroom environment, resulting in an insufficient amount of time for
building academic skills (Hallahan et al., 2011). Therefore, the study was also limited by
the unpredictability of the emotional and behavioral states of the students with EBDs
(Prather-Jones, 2011), because controlling the emotional and behavioral states of the
students was not possible during the administration of either the MAP or the Piers-
Harris 2. Another limitation of this study was the inability to demonstrate cause and
effect. The differences found between the two learning environments may not have been
caused by the type of environment (SCLE vs. MLRE), but by other differences between
the schools not accounted for in the study.

**Ethical issues.** In conducting this research study, both ethical concerns and the
basic ethical principles of the dignity, rights, and welfare of the individual were met as
prescribed in federal regulations involving human subjects (U.S. Department of Health
and Human Services, 2008). Formal permission from the Institutional Review Board of
Northcentral University was obtained to ensure that ethical principles were upheld. The confidentiality of data was protected to the fullest extent possible (Wright & Marsden, 2010). Academic data were collected through the MAP computer program and were protected with the security means provided by the Northwest Evaluation Association. Self-concept data were kept secure so that no unauthorized person had access to the information. All information was presented without any names.

An overview of the implications of the study is provided in this chapter. The key points and findings of the study are discussed and summarized. In addition; recommendations for the practical applications of the study are presented.

**Implications**

The first research question stated, “To what extent, if any, is there a difference in academic achievement, as measured with the MAP, between students with EBDs educated in a SCLE and students with EBDs educated in a MLRE, among middle school students with EBDs?” The null and alternative hypotheses were as follows:

**H1." There is no significant difference in academic achievement, as measured with the MAP, between students with EBDs educated in a SCLE and students with EBDs educated in a MLRE, among middle school students with EBDs.**

**H1a.** There is a significant difference in academic achievement, as measured with the MAP, between students with EBDs educated in a SCLE and students with EBDs educated in a MLRE, among middle school students with EBD.

In this study, the composite academic score for 2007 was significantly higher for the MLRE group than for the SCLE group. The mathematics and language arts composite scores were also significantly higher for the MLRE group. There were no
significant differences in baseline scores for 2005 for any academic scores. All within-
group differences were significant, indicating improvement in all academic achievement

Students with EBDs tend to underachieve academically (Carr-George et al., 2009;
Montague et al., 2007; Rutherford et al., 2007). Students with EBDs educated in a SCLE
scored significantly lower or showed no improvement over time on a variety of academic
measures, including reading and language arts, when compared to a similar sample of
students with EBDs placed in general education classrooms (Lingo, Slaton, & Jolivette,
2006; Trout et al., 2008; Wei et al., 2012). Corrective reading interventions and
strategies did not improve reading achievement among students with EBDs (McDaniel,
Duchaine, & Jolivette, 2010). Similarly, students with EBDs underperformed
mathematically in both SCLEs and MLREs (Rutherford et al., 2007; Templeton, Neel, &
Blood, 2008). Among MLRE students with EBDs, mathematics scores have been the
lowest of any academic area (Billingsley, Scheuermann, & Webb, 2009). Even when
students with EBDs are educated in a MLRE, they tend not to improve academically over
time (Lane & Menzies, 2010).

The findings of the current study were not consistent with the findings of previous
research. The disparity is best explained by the highly expert environment in the selected
school district. This interpretation lends strong support to the broken glass theory, which
addresses issues of anger, aggression, and anxiety (Chisolm, 2008). All of these issues
have direct effects on the academic performance of students with EBDs (Chisolm, 2008).
The broken glass theory explains the need to provide a learning environment with
optimal support for the student with an EBD.
The results of the current study showed the importance of ensuring that students with EBDs are educated by individuals with high levels of professional expertise in mental health and special education. The ideal learning environment for these children provides emotional and behavioral support as well as academic support (Rutherford et al., 2007). As a result of the special-needs expertise in this environment and the backgrounds of the educators in mental health and education, the teachers were able to communicate self-instructional procedures to students with EBDs. The findings suggested that the traditional academic setting or approach may not be the best format for this population (Farley et al., 2012). Finally, researchers and educators remain ambivalent regarding the inclusion of this population in general education classrooms, and opposition is firm in some cases (Hallahan et al., 2011; Rutherford et al., 2007). However, the findings in this study support the benefits of inclusive classrooms under the conditions of a highly expert learning environment.

Research question 2. The second research question stated, “To what extent, if any, is there a difference in self-concept, as measured with the Piers-Harris 2, between students with EBDs educated in a SCLE and students with EBDs educated in a MLRE, among middle school students with EBDs?” The null and alternative hypotheses were as follows:

H20. There is no significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.
H2a. There is a significant difference in self-concept, as measured with the Piers-Harris 2, between students with EBD educated in a SCLE and students with EBD educated in a MLRE, among middle school students with EBD.

Among middle school students with an EBD, there were no significant differences between MLRE students and SCLE students in either overall self-concept scores or subscale scores for 2007. The only significant between-group difference was found in the 2005 baseline score for freedom from anxiety, \( p = .046 \). Within-group improvements from baseline to 2007 were significant for all self-concept scores, \( p < .01 \).

The mean overall self-concept scores were in the average range for both groups. Participants in this range reported a balanced self-evaluation, with acknowledgement of both positive and negative aspects of self (Piers & Herzberg, 2009). The findings of this study departed from the findings in previous literature regarding self-concept. Previous researchers have found that students with EBDs frequently have self-concept scores associated with diagnosable psychiatric disorders, such as major depressive disorders, anxiety disorders, and conduct disorders, all of which may require therapeutic intervention (Awad, 2007; Gargiulo, 2010; Piers & Herzberg, 2009).

The results of this research question highlighted the importance of having professionals highly skilled in the fields of both mental health and special education available to educate students with an EBD. This combination of skills is needed to handle the emotional and behavioral needs of this population (Algozzine et al., 2010; Gage et al., 2012). Many general and special education teachers are not prepared to assist the student with an EBD to recognize, strategize and cope with their self-concept or their social and emotional needs (Mayer et al., 2005; Robinson et al., 2007). Most schools are
professionally understaffed and structurally inadequate to handle the complicated emotional and behavioral issues displayed by this population (Gage et al., 2012). Teacher preparation programs designed to prepare special educators to teach students with an EBD provide little or no training in assessing and providing interventions that address low self-concept or positive illusory bias directly (Basco-Ramirez et al., 2007; Gage et al., 2012; Robinson et al., 2007). Students with EBDs may be socially isolated and unable to make or sustain friendships in school, but educators trained in mental health are able to assist these students in their social growth. Highly skilled professionals are able to develop goals and strategies along with the student without undermining their self-concept.

The results of the study supported the broken glass theory. The important findings of this study were related less to the comparison of the two learning environments than to the within-group improvements from baseline to 2007. The school programs, with their offerings of highly skilled professionals, made a difference in the lives of students with an EBD. The findings were contrary to findings of previous research suggesting a failure to improve in either self-concept (Awad, 2007; Rutherford et al., 2007; Sciarra, 2011; Weishaar, 2008) or academic achievement (Hallahan et al., 2011; Hadley, et al., 2008; Ntshangase et al., 2008).

**Recommendations**

Students with EBDs have a multitude of problems that adversely affect their learning environment and their abilities to function properly in either general or special-needs learning environments (Hallahan et al., 2011). The results of this study showed that more intensive and innovative strategies must be used with this population to achieve
academic and social success in school. Highly expert learning environments are needed in schools to educate these students. Curricula are needed that focus on social and emotional learning strategies to reduce problem behaviors and increase academic achievement. It is recommended that along with academic standards set by state and federal agencies, these curricula integrate a focus on the cognitive and behavioral needs of the students. It is recommended that techniques to foster cognitive-behavioral skills be developed and implemented. Short-term strategies are needed to assist the student with an EBD in understanding how thoughts, emotions, and behaviors are connected and affect one another (Chisolm, 2008). These strategies will help to ensure positive short-term and long-term academic and personal outcomes for students, as well as decreasing levels of emotional distress and conduct problems. Improvements are likely to occur in social-emotional skills, attitudes about self and others, and positive social interactions (Collaborative for Academic, Social, and Emotional Learning, 2011).

Collaboration and communication between families of students with EBD, schools, and mental health agencies are recommended to create an intensive, unified system of care (Cullinan, 2007). In this way, it will be possible to provide academic, emotional, and behavioral support for students with EBDs, thereby keeping them in their homes and schools (Cullinan, 2007). The lack of access and the lack of a unified system of care have resulted in a serious deficit in matching the individual needs of students with EBDs and their families with the appropriate level of service needed to address students’ individual problems adequately (Epstein et al., 2008). More efficient and effective coordination between the multiple agencies providing services for this population is recommended.
It is recommended that programs for teachers of students with EBDs be implemented to develop expertise not only in education but also in mental health. To date, most special-education teacher programs that prepare teachers to teach this population has focused on educational practices instead of on practices related to mental health issues (Cook et al., 2003, Kern et al., 2009; Robinson et al., 2007). Special education teachers are needed who are trained and certified in some form of behavioral analysis or cognitive therapy.

The focus of EBD research has been either behavioral or educational (Nelson, 2003, Robinson et al., 2007). For future research, academic support should be addressed together with emotional and behavioral support as one interlocking issue rather than with two sets of guidelines, one set for educational interventions and another set for emotional and behavioral interventions. Additionally, it is recommended that research should be focused more on both large-scale issues and the particular needs and circumstances of specific schools or school districts.

It is recommended that curriculum-based measurements of this population be designed to evaluate not only academic progress but also emotional and behavioral progress for students with EBDs. Similar studies in different districts and with larger samples of students are needed to determine if the results can be replicated when high levels of expertise are provided. Finally, further research into the relationships of students with EBDs to their peers is recommended to determine the factors associated with positive and negative academic and social outcomes of this population.
Conclusions

Students with EBDs display inappropriate, moody, or negative behaviors, which directly affect their academic achievement in different learning environments (Barbetta et al., 2006; Sciarra, 2011). As a result, the academic achievement and self-concept of students with EBD are unfavorably affected in ways unexplainable by intellectual, sensory, or other health factors (Buckley, 2009). Although research for students with EBDs has increased, the educational outcomes have been bleak (Van Eck et al., 2007).

This study was designed to investigate academic achievement and self-concept scores for two groups of students with EBD based on whether the students had been placed into SCLE or MLRE learning environments. When group main effects were evaluated, academic achievement was significantly higher for the MLRE group than for the SCLE group in 2007, even though 2005 baseline scores did not differ significantly. Between-group differences in self-concept scores were not significant. However, within-group scores for academic achievement and self-concept improved significantly between 2005 and 2007 for both groups. The findings demonstrated that when these children are given an opportunity with a highly skilled professional staff trained in both mental health counseling and special education, improvements are possible.
References


Appendixes
Appendix A:

Piers-Harris 2 Self-Concept Form

1. My classmates make fun of me. ......................... yes no
2. I am a happy person. ................................. yes no
3. It is hard for me to make friends. ....................... yes no
4. I am often sad. ......................................... yes no
5. I am smart. ............................................... yes no
6. I am shy. ................................................. yes no
7. I get nervous when the teacher calls on me. .......... yes no
8. My looks bother me. .................................... yes no
9. I am a leader in games and sports. ...................... yes no
10. I get worried when we have tests in school. .......... yes no
11. I am unpopular. ........................................ yes no
12. I am well behaved in school. ............................ yes no
13. It is usually my fault when something goes wrong. yes no
14. I cause trouble to my family. ........................... yes no
15. I am strong. .............................................. yes no
16. I am an important member of my family. .............. yes no
17. I give up easily. ......................................... yes no
18. I am good in my schoolwork. ............................ yes no
19. I do many bad things. ................................... yes no
20. I behave badly at home. ................................ yes no
21. I am slow in finishing my schoolwork. ................. yes no
22. I am an important member of my class. ................. yes no
23. I am nervous. .......................................... yes no
24. I can give a good report in front of the class. ......... yes no
25. In school I am a dreamer. ................................ yes no
26. My friends like my ideas. ................................ yes no
27. I often get into trouble. ................................ yes no
28. I am lucky. ............................................. yes no
29. I worry a lot. ........................................... yes no
30. My parents expect too much of me. ...................... yes no
31. I like being the way I am. ............................... yes no

The Way I Feel About Myself

PIERS-HARRIS 2
AutoScore™ Form

by Ellen V. Piers, Ph.D., Dale B. Harris, Ph.D.,
and David S. Herronberg, Ph.D.

Client's Name (or ID #): ____________________________

Today's Date: ____________________________ Age: ______

Gender: (circle one) Female Male Grade: ______

School: ____________________________

Teacher's Name (optional): ____________________________

Race/Ethnicity: □ Asian □ Hispanic □ White
□ Black □ Native American □ Other

Directions

Here are some sentences that tell how some people feel about themselves. Read each sentence and decide whether it tells the way you feel about yourself. If it is true or mostly true for you, circle the word yes next to the statement. If it is false or mostly false for you, circle the word no. Answer every question, even if some are hard to decide. Do not circle both yes and no for the same sentence. If you want to change your answer, cross it out with an X and circle your new answer.

Remember that there are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark each sentence the way you really feel inside.

Copyright © 2001 by Ellen V. Piers and Dale B. Harris.
Not to be reproduced in whole or in part without written permission of Western Psychological Services.
W-388A All rights reserved. Printed in U.S.A.
<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.</td>
<td>I feel left out of things.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>I have nice hair.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>I often volunteer in school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>I wish I were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>I hate school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>I am among the last to be chosen for games and sports.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.</td>
<td>I am often mean to other people.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.</td>
<td>My classmates in school think I have good ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>I am unhappy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td>I have many friends.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td>I am cheerful.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td>I am dumb about most things.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44.</td>
<td>I am good-looking.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.</td>
<td>I get into a lot of fights.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>I am popular with boys.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td>People pick on me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48.</td>
<td>My family is disappointed in me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>I have a pleasant face.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>When I grow up, I will be an important person.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td>In games and sports, I watch instead of play.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52.</td>
<td>I forget what I learn.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53.</td>
<td>I am easy to get along with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54.</td>
<td>I am popular with girls.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.</td>
<td>I am a good reader.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56.</td>
<td>I am often afraid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.</td>
<td>I am different from other people.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58.</td>
<td>I think bad thoughts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.</td>
<td>I cry easily.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.</td>
<td>I am a good person.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B:

School District Permission Letter

Attachment B:

Permission Letter

January 13, 2012

Superintendent Dr. Lynn Moody
Rock Hill School District 3
660 Anderson Rd N
Rock Hill, SC 29730

Dear Dr. Lynn Moody:

My name is Terrence R. Chisolm, and I am a middle school special education teacher at Saluda Trail Middle School. I am currently a doctoral candidate at Northcentral University in Prescott City, Arizona. To complete the requirements for my doctorate, I am writing a dissertation entitled: The Effect Learning Environments have on Academic Achievement and Self-Concept of Middle School EBD Students.

The purpose of the proposed study is to investigate differences in academic achievement and self-concept scores between two different groups of emotional and behavioral students based on whether the students have been placed into a self-contained or mainstream learning environment. The Piers-Harris 2 will be used to gather data concerning self-concept. Academic achievement of the participants will be measured based upon Northwest Evaluation Association’s computer adaptive assessment called Measure of Academic Progress (MAP). The data will be archival; academic achievement scores will be collected from 2004-2011 and self-concept scores will be collected from 2006-2011. The information gained from the proposed study will address the academic achievement and self-concept of students with emotional and behavioral disorders in two different learning environments.

I am particularly interested in having permission to use the archival data and the assistance of the district personnel in retrieving the archival data. Anonymity and confidentiality of names of students associated with the data will be assured with the use of pseudonyms. No other than
myself will have access to the archival data. Coding of data will be organized in such a way to
insure anonymity names of students associated with the data.

In order to proceed with my dissertation, I must have a signed letter from you or your designated
representative stating your consent.

Please feel free to contact me at 803-517-2894 or via email at tchisolm@rhmail.org if you have
any questions or concerns pertaining to the study. Your support of my efforts in conducting this
research will be greatly appreciated. Your signature or your designated representative’s
signature at the bottom will verify your consent for this study to move forward and be
completed.

[Signature]

Date

[Signature]

[Associate Superintendent, Rock Hill Schools]

I, [or my designated representative] Superintendent of Rock Hill
School District 3, give permission to Terrence R. Chisolm to complete the study as discussed in
this letter.
Appendix C:

Piers-Harris 2 Consent Form

Dear Scholarly Researcher —

Thank you for your interest in using restricted test materials in scholarly study.

WPS encourages scholarly research with test instruments, and you do not require permission to use the publications we provide in this context, with the following stipulations:

1. No reproduction, adaptation or translation of the materials may be made in any format, for any purpose, electronic or otherwise, without the prior, written permission of the copyright holder.

2. All materials must be purchased and used by, or under the direct supervision of, a qualified professional. As a formality for our records, please complete and return a WPS qualifications questionnaire, available on our website at https://portal.wpspublish.com/portal/page?_pageid=73,30404&_dad=portal&_schema=PORTAL; and

3. All materials must be used ethically and for the purposes and in the manner for which they were intended.

For information on ordering, see our website, www.wpspublish.com, or contact WPS Customer Service: e-mail customerservice@wpspublish.com; fax 424/201-6950; phone 800/648-8857 (US and Canada) or 424/201-8800, weekdays 7:30am to 4:30pm Pacific.

We look forward to future contacts. Please feel free to let me know if you have any questions.

Sincerely yours,

Susan Dunn Weinberg
WPS Rights and Permissions Manager
e-mail: rights@wpspublish.com

SDW:se
Appendix D:

Informed Consent Form

Informed Consent Form

The Effect Learning Environments have on Academic Achievement and Self-Concept of Middle School Students with EBD.

Purpose. You are invited to participate in a research study being conducted for a dissertation at Northcentral University in Prescott, Arizona. The purpose of this study is to investigate differences in academic achievement and self-concept scores between two different groups of emotional and behavioral students based on whether the students have been placed into a self-contained or mainstream learning environment. There is no deception in this study. I am solely interested in investigating the effect learning environments have on academic achievement and self-concept of middle school students with EBD.

Participation requirements. You will be asked to provide archival data as it relates to academic achievement and self-concept. Self-concept will come from The Piers-Harris 2 and academic achievement of the participants will be measured based upon Northwest Evaluation Association’s computer adaptive assessment called Measure of Academic Progress (MAP).

Research Personnel. I am Terrence R. Chisolm and the sole researcher involved in this study. I may be contacted at any time via the following e-mail address: tchis3@yahoo.com or at 803-517-2894. Dissertation chair person, Dr. Donna Graham at dgraham@my.ncu.edu. The IRB can be reached at irb@ncu.edu.

Potential Risk/Discomfort. Although there are no known risks in this study, some of the information is personally and academically sensitive. However, you may withdraw at any time and you may choose not to answer any question that you feel uncomfortable in answering.

Potential Benefit. There are no direct benefits for participating in this research. No incentives are offered. The results will have scientific interest which will have scientific interest which may eventually have benefits for educators and the field of education.

Anonymity/Confidentiality. The data collected in this study are confidential. Anonymity and confidentiality of names of students associated with the data will be assured with the use of pseudonyms. No other than the researcher will have access to the archival data. Coding of data will be organized in such a way to insure anonymity of names of students associated with the data.

Right to Withdraw. You have the right to withdraw from the study at any time without penalty. You may decline or withdraw at anytime during the research.

I would be happy to answer any question that may arise about the study. Please direct your questions or comments to: Terrence R. Chisolm at tchis3@yahoo.com or 803-517-2894.

Signatures

I have read the above description of the proposed dissertation study and understand the conditions of my participation. My signature indicates that I agree to participate in the experiment.

Participant's Name: ___________________ Researcher's Name: Terrence R. Chisolm

Participant's Signature: _______________ Researcher's Signature: _______________

Date: ______________