THE RELATIONSHIP BETWEEN THE LEVEL OF SPECIAL EDUCATION INSTRUCTIONAL SUPPORT SEGMENTS AND THE ACADEMIC ACHIEVEMENT OF STUDENTS WITH EMOTIONAL BEHAVIOR DISORDERS

by
MaryKay Buchko Berry
Liberty University

A Dissertation Presented in Partial Fulfillment of the Requirements for the Degree
Doctor of Education

Liberty University
September, 2012
THE RELATIONSHIP BETWEEN THE LEVEL OF SPECIAL EDUCATION INSTRUCTIONAL SUPPORT SEGMENTS AND THE ACADEMIC ACHIEVEMENT OF STUDENTS WITH EMOTIONAL BEHAVIOR DISORDERS
by MaryKay Buchko Berry

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

Liberty University, Lynchberg, VA

September, 2012

APPROVED BY:

Beth E. Ackerman, EdD, Committee Chair
Andrea P. Beam, EdD, Committee Member
Jan W. Otter, PhD, Committee Member
Scott B. Watson, PhD, Associate Dean, Advanced Programs
ABSTRACT

Researchers have extensively studied the effects of placement on academic and behavioral interventions for students with disabilities and have found varying results. A correlational research design was used to determine if there was a relationship between the level of special education support (amount of time spent with special education support) for students with emotional behavior disorders (EBD) and student achievement in reading and math as measured by performance on the Georgia Criterion Referenced Competency Test (CRCT). The study included 81 students with EBD in a small rural school district in Georgia in grades six through eight over the 2007-2008, 2008-2009, and 2009-2010 school years. The results of this study indicated that there is little relationship between the level of special education instructional support and the academic achievement in reading and math of students with EBD. Findings showed that student mean math scale scores were below the acceptable range of proficiency in all three-grade levels. Recommendations for practical application and future research were included.
Acknowledgments

Philippians 4:13 says I can do all things through Christ who strengthens me. I want to thank each and every one of my family, friends, and colleagues that were used to provide me that strength, support, and encouragement.

To my husband, Keith, we have been through this each and every step of the way together. Your help, support, and encouragement carried me through to the very end. I am right here waiting for you!

To my children, Parker and Addie, thank you for all the sacrifices you have each made throughout this process. You have each waited patiently for, “When I finish my dissertation.” I hope that I have modeled for you that hard work and perseverance of your dreams does pay off in the end. I love you both beyond measure. Thank you for reminding me what is truly important.

To my mother, Cheryl, thank you for believing in me when I did not believe in myself. You have modeled great strength for me. Thank you!

To my grandmother, Irene, you have encouraged me and pushed me to become better and better. Thank you, Gram. I did it!! I know, “Pop would be so proud.”

I would also like to thank Dr. Beth Ackerman, for serving as my dissertation committee chair. Your guidance, support, and encouragement were invaluable.

I would also like to thank Dr. Andrea Beam, for your guidance and patience. Your passion for meeting students’ needs is contagious, and I thank you for that!

Finally, Dr. Jan Otter, words cannot begin to express how grateful I am to you for your help, support, and encouragement. I could not have done this without you!
# Table of Contents

Acknowledgments ........................................................................................................... 4

List of Tables .................................................................................................................... 8

List of Figures .................................................................................................................. 9

CHAPTER ONE: INTRODUCTION .................................................................................. 11
  Background .................................................................................................................... 13
  Problem Statement ....................................................................................................... 14
  Significance of the Study ............................................................................................... 15
  Research Questions and Null Hypotheses .................................................................... 16
  Identification of Variables ............................................................................................. 18
  Assumptions ................................................................................................................... 19
  Limitations ..................................................................................................................... 19
  Definitions of Key Terms .............................................................................................. 20
  Summary ......................................................................................................................... 24

CHAPTER TWO: REVIEW OF THE LITERATURE ....................................................... 25
  Theoretical Framework .................................................................................................. 27
  History of Special Education Services .......................................................................... 29
  History of Special Education Services for Students with EBD ................................. 32
  IEP and FTE Processes in Georgia .............................................................................. 35
  Special Education Services for EBD Students ............................................................ 40
  Variables that Impact the Level of Special Education Support and Academic
  Achievement ................................................................................................................. 43
CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Summary of the Findings

Research Questions 1–3: Middle School Reading Achievement

Research Questions 4–6: Middle School Math Achievement

Discussion of the findings

Limitations

Implications

Recommendations

Recommendations for Practical Application

Recommendations for Further Research

Conclusion

REFERENCES

APPENDIX A: SUPERINTENDENT PERMISSION

APPENDIX B: SPECIAL EDUCATION DIRECTOR PERMISSION

APPENDIX C: IRB APPROVAL
List of Tables

Table 1. NGSD System Demographics .................................................................56

Table 2. Descriptive Statistics for the Independent and Dependent Variables.........63
List of Figures

Figure 1. The alignment of environment, setting and level of special education support .39
Figure 2. Histogram of 6th grade reading CRCT scores ............................................66
Figure 3. Histogram of 7th grade reading CRCT scores .............................................67
Figure 4. Histogram of 8th grade reading CRCT scores ..............................................68
Figure 5. Histogram of 6th grade math CRCT scores .................................................69
Figure 6. Histogram of 7th grade math CRCT scores ................................................70
Figure 7. Histogram of 8th grade math CRCT scores ................................................71
Figure 8. Histogram of 6th grade special education support segments .......................72
Figure 9. Histogram of 7th grade special education support segments .......................73
Figure 10. Histogram of 8th grade special education support segments ......................74
Figure 11. Scatterplot for 6th grade reading CRCT and support segments .....................75
Figure 12. Scatterplot for 7th grade reading CRCT and support segments .....................76
Figure 13. Scatterplot for 8th grade reading CRCT and support segments .....................77
Figure 14. Scatterplot for 6th grade math CRCT and support segments .......................78
Figure 15. Scatterplot for 7th grade math CRCT and support segments .......................79
Figure 16. Scatterplot for 8th grade math CRCT and support segments .......................80
List of Abbreviations

Adequate yearly progress (AYP)
Criterion-Referenced Competency Test (CRCT)
Emotional behavioral disorders (EBD)
Free Appropriate Public Education (FAPE)
Full-Time Equivalent (FTE)
Georgia Performance Standards (GPS)
Individualized Education Plan (IEP)
Individuals with Disabilities Education Act (IDEA)
Least restrictive environment (LRE)
No Child Left Behind (NCLB)
Northeast Georgia School District (NGSD)
Response to intervention (RtI)
Students with disabilities (SWD)
CHAPTER ONE: INTRODUCTION

Educators today have the unique opportunity to effectively work with increasingly diverse populations in their classrooms. This includes educating students identified as having emotional behavioral disorders (EBD) in the general education classrooms and ensuring their inclusion in all aspects of the school community. This can be challenging and difficult, depending upon the specific needs of the EBD students. With the current focus of schools meeting the mandated demands of No Child Left Behind (NCLB) and ensuring that they meet the required adequate yearly progress (AYP), students are being served in various ways in an effort to guarantee they are exposed to the curriculum that would make certain these requirements are met (Stoutjesdijk, Scholte, & Swaab, 2012).

Gaylord, Quinn, McComas, and Lehr (2005) state that to effectively educate students with EBD, there must be collaboration between all the instructional and administrative staff in the school. Sufficient resources must be available at the school and district levels to help sustain teachers with the educational practices that allow for teachers to instruct students with difficult-to-manage behaviors. If students receive the appropriate level of special education support (i.e., number of special education segments of service), teachers should be effective in meeting the academic and behavioral needs of all students in the classroom setting (Kauffman, Mock, & Simpson, 2007; Lane, Jolivette, Conroy, Nelson & Benner, 2011; Stoutjesdijk et al., 2012). Thus, the presence of students with EBD in their classrooms would have minimal impact on the educational achievement of all students in the classroom. Teacher perceptions of these
resources vary and may have an impact on the successful inclusion of students with EBD in the general education setting, therefore possibly impacting placement decisions. Researchers insist that educators and other stakeholders must be in agreement in implementing prevention and intervention efforts (Davis, Young, Hardman, & Winters, 2011; Gage et al., 2010; Gaylord et al., 2005). Additionally, there must be a willingness on the part of teachers to explore new teaching methods that more actively engage students with EBD and participate in ongoing staff development and training needed to update and maintain educator skills in working with students with EBD. Sufficient resources must be available at the school and district levels to sustain school programs.

Teachers must be provided the support necessary to make inclusive practices successful for all students, including those students identified as EBD. What has been identified as a successful intervention practice for some students may, in fact, not be effective in meeting the needs of students with EBD.

Davis et al. (2011) indicate that in order for interventions to be effective in the least restrictive environment (LRE), many conditions must be met. They report that school personnel must be afforded the opportunity to develop substantial knowledge, expertise, and experience in the development, implementation, and evaluation of interventions and procedures that are effective in meeting the individual needs of students who have been identified with EBD, both behaviorally and academically. Once they have identified these skills, they need the opportunity, time, and resources to become proficient in meeting the ever-changing needs of these students; however, Dowret and Maich (2007) indicate that this is often not the case. Teachers often have very little
training in dealing with students who display significant behavioral difficulties. They are often unprepared and lack clear expectations in meeting the needs of students with EBD.

**Background**

Kauffman and Landrum (2009) indicate that approximately 3%–6% of the school-aged population is in need of special education support or related services as a result of an emotional or behavioral need. These students are served in a variety of ways. The level of special education support (i.e., number of special education segments of service) that a student with EBD receives, is determined by a team of parents, teachers, administrators, and other related service providers. These individuals collaboratively determine the appropriate amount of support for the student. According to Payne, Marks, and Bogan (2007), there is limited research for effectively providing academic instruction for students with EBD. Pair that with a lack of individuals who are trained to teach this difficult population, and often the end result is over-identification and placement in a more restrictive setting for the education of students with EBD (Davis et al., 2011; Dowert & Maich, 2007; Harrington, 2011; Lehr & McComas, 2005; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004; Wagner, Kutash, Duchnowski, Epstein, & Sumi, 2005; Williams-White, Scahill, Klin, Koenig, & Volkmar, 2007). The level of special education support should be based upon the individual behavioral and academic needs of the students. When this is the case, and support is appropriate, the students’ needs are met. The end result should be a decrease in the number of discipline referrals that are made, as well as an increase in the academic achievement for that individual student (Carlberg & Kavale, 1980; Gage et al., 2010; Zigmond, 2006).
Problem Statement

Students who have been identified as EBD perform significantly below grade level when compared to their same-age peers. They are often placed in more restricted instructional environments, have limited access to highly qualified teachers, and are noted to have increased rates of suspension and expulsion and low rates of post-school employment (Bradley, Doolittle, & Bartolotta, 2008; Gage et al., 2010). They fail more courses, earn lower grade point averages, and drop out of school at higher rates. As a disability group, they display serious academic deficits in all content areas (Gage et al., 2010; Nelson, Benner, Lane, & Smith, 2004; Reid, Gonzalez et al., 2004). In light of this research, educators are faced with the daunting task of considering the most appropriate special education services to meet both the academic and behavioral needs for students with EBD in the LRE.

This study analyzed reading and math achievement scores for students with EBD in grades six through eight based on the level of special education support they received. Georgia Criterion-Referenced Competency Test (CRCT) results from the 2008, 2009, and 2010 administrations in reading and math for students with EBD were analyzed to determine if there was a relationship between the level of special education support and their academic achievement. The study was designed to answer the following question: Is there a relationship between the level of special education support and the academic achievement of students with emotional behavioral disorders?

Purpose Statement

The purpose of this study was to determine if there was a relationship between the level of special education support for students with EBD and their academic achievement.
in reading and math as measured by performance on the CRCT. For this study, the level of special education support is defined as the amount of time that a student is served in special education as measured by full time equivalent (FTE) instructional segments. This will be explained in more depth in Chapter 2. The results of this study may assist school districts in making more informed decisions about the level of special education support or services for students with EBD that will increase their academic achievement. A review of the literature yielded numerous studies regarding practices related to social, emotional or behavioral outcomes in various settings. However, little research has been done regarding the academic achievement of students with EBD in relation to the varying levels of special education support that is provided through the educational setting.

**Significance of the Study**

Much research has been done in the field of special education to determine the effectiveness of placement on meeting the overall needs of students with disabilities, often excluding those students identified as EBD (Davis et al., 2011; Dowert & Maich, 2007; Harrington, 2011; Lehr & McComas, 2005; Reid et al., 2004; Wagner et al., 2005; Williams-White et al., 2007). Research regarding this population typically focuses on behavioral interventions with the setting typically self-contained (Hinkle, 2008). There is little research regarding academic achievement or performance of students with EBD on statewide assessments, given a variety of educational settings and level of special education support (Carr-George, Vannest, Wilson, & Davis, 2009; Harrington, 2011; Hinkle, 2008). It was the hope of this study to explore the relationship between the EBD population and the implications of how the appropriate level of special education support has the potential to impact academic achievement.
Research Questions and Null Hypothesis

The 2008, 2009, and 2010 CRCT scores of students identified as EBD who were provided varying levels of special education support were analyzed to address the following questions and null hypotheses:

Research Question 1: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H₀₁): There will be no significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 2: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H₀₂): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 3: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.
identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis ($H_03$): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 4: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis ($H_04$): There will be no significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 5: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis ($H_05$): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.
Research Question 6: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis ($H_{06}$): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

**Identification of Variables**

The independent variable in this study was the level of special education support for students with EBD as measured by instructional segments reported in FTE. The instructional day is broken down into six segments in which students can receive support. The level of special education instructional support was pre-determined by the individualized education plan (IEP) team based on the individual academic and behavioral needs of each student. Students can receive between less than one full segment and up to six full segments of support in an instructional day. The October FTE reports from the Georgia Department of Education for 2008, 2009, and 2010 were used to determine the number of segments and level of special education instructional support the student with EBD received. Each system is responsible for reporting this information to the state two times per school year.

Academic achievement in reading and math for students with EBD as measured by the reading and math CRCT for grades six through eight was the dependent variable in this research study. For the purpose of this research, academic achievement is defined as
meeting or exceeding the minimum state requirements for passing the CRCT. While this is explained in depth in Chapter 3, a minimum scale score of 800 is required to meet the state standards and an 850 to exceed the standards.

**Assumptions**

Given the opportunity to be exposed to grade level standards and to be provided appropriate accommodations to access the curriculum, students with EBD can be expected to achieve academically and perform well on statewide assessments (Carr-George et al., 2009; Siperstein, Wiley, & Forness, 2011). One of the purposes of the IEP team is to determine the specific individual needs of a student with a disability and then to determine the best setting and amount of time that is required to meet those needs. With this in mind, an assumption of this study was that the decisions made at the IEP meetings of students with EBD, included in the study, gave consideration to the appropriate setting for students to allow them to receive optimal academic and behavioral interventions. Therefore, it was assumed that each student was placed in the setting with the appropriate amount of time that best met his or her academic and behavioral needs as determined by the IEP team.

**Limitations**

Given a study such as this, it is important to remember that while there has been much research done surrounding the population of students with EBD, the focus has been on behavioral interventions and meeting students’ needs in a restrictive setting such as resource or self-contained. In this research study, the data that are represented comes from a smaller school district, and, while all students who have been identified as EBD were considered in the study, the sample size remains small. This could cause some
concerns with the generalizability of the results. However, the population of students that were studied similarly represented those identified at the state and federal levels (National Center for Educational Statistics, 2010; U.S. Department of Education, 2008). Since the participants encompassed the whole population of middle school students with EBD and inferential statistics were used, results could be generalized to middle school students with EBD in the state of Georgia. Furthermore, the study used state test scores and state FTE instructional segments as the measures for the variables.

This study was not designed to examine or determine the effectiveness of teacher pedagogy. While the curriculum and the expectations of each student mastering his or her grade level performance standards is the same, teaching styles, instructional strategies, and teachers’ ability levels will vary and possibly affect academic achievement. In addition, teachers’ lack of tolerance in dealing with disruptive behaviors may lead to considerations for a more restrictive placement as they are represented on the IEP team.

Definitions of Key Terms

*Academic achievement:* The quantitative measurement of the academic advancement of students. In the public school setting, this is typically measured by a standardized assessment and the students meeting the minimum requirements of the grade level standards for the statewide assessment (Vannest, Temple-Harvey, & Mason, 2009).

*Behavior management:* The focus of maintaining order in a specified setting such as a classroom or school (Siperstein et al., 2011).
Co-teaching: The instructional setting, for the student who qualifies for specialized instruction, is enhanced by adding an additional teacher who oversees the modifications and/or accommodations within a general education setting with non-disabled peers (Downing, & Peckham-Hardin, 2007).

Criterion-Referenced Competency Test (CRCT): A standardized assessment given annually to students in grades one through eight in the state of Georgia (Georgia Department of Education Testing Division, 2008).

Differentiated instruction: Teaching students through the use of multiple means based upon the specific needs of the individual. Differentiation encourages the use of teaching materials based on the instructional levels of students within a classroom (Tomlinson, 2004; Tomlinson & McTighe, 2006).

Emotional behavioral disordered: Students with an inability to learn that cannot be explained by intellectual, sensory, or health factors (Gage et al. 2010).

Environment: The state of Georgia identifies 10 different educational environments or settings in which students with disabilities can receive support. These include: (a) general education classroom at least 80% of time, (b) general education classroom at least 40% of time but no more than 79% of the time, (c) general education classroom less than 40% of time, (d) public separate facilities, (e) private separate facilities, (f) public residential facilities, (g) private residential facilities, (h) correctional facilities, (i) hospital/homebound, (j) parentally placed in private school (Georgia Department of Education Office of Technology Services, 2010).

Full-time equivalent: The Quality Basic Education (QBE) Act requires local school systems to report student enrollment in terms of full-time equivalent (FTE)
students. State funding for the operation of instructional programs are generated from FTE data reported by local school systems. FTE reporting refers to the state funding mechanism based on student enrollment and educational services local school systems provide for the students. Educational programs are divided into seventeen state-funded categories. A specific funding weight is assigned to each category. The base amount of money received for each FTE student is determined by the Georgia General Assembly (Georgia Department of Education Office of Technology Services, 2010).

*General education:* A setting in which grade level standards is presented to a group of students with the expectation that they should be able to achieve such standards (IDEA, 1997; Turnkington & Anan, 2007).

*Individuals with Disabilities Education Act (IDEA):* A law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children, and youth with disabilities (IDEA, 1997; Turnkington & Anan, 2007).

*Instructional support segment:* An instructional segment is the amount of time provided to a student during one-sixth of an academic day. For purposes of reporting FTE, the academic day is divided into six equal segments of instructional time. FTE funding is allocated only for state-approved instructional programs for the basic six-hour day (Georgia Department of Education Office of Technology Services, 2010).

*Least restrictive environment (LRE):* The federal requirement that students with disabilities be educated in the environment in which they can succeed with support. This
may include the general education setting, separate classes, separate schools, home instruction, and instruction in hospitals and institutions (IDEA, 2004).

*Level of special education support:* The measurement of special education services provided to a student with disabilities ranging from less than one segment to a full six segments in an academic day. (A term coined for the purpose of this study).

*Resource:* The resource setting is an instructional setting for the student who qualifies for an intensive specialized instruction in an individualized or small group setting away from their non-disabled peers for a portion of the day (Turnkington & Anan, 2007).

*Students with disabilities (SWD):* Students with an identified disability who may need additional specialized instruction to meet their educational goals (National Center for Educational Statistics, 2010).

*Self-contained:* Self-contained is an instructional setting for the student who qualifies for more intensive specialized instruction in an individualized or small group setting away from their non-disabled peers for a majority of the day (Turnkington & Anan, 2007).

*Setting:* See environment.

*Supportive instruction:* Supportive instruction is an instructional setting for the student who qualifies for specialized instruction, by an additional teacher or paraprofessional, through modifications and or accommodations within a general education setting with their non-disabled peers (Turnkington & Anan, 2007).
Summary

Given the increase in accountability for all students, including students with disabilities, to meet expectations on statewide testing, students are being served in various ways to guarantee exposure to the curriculum to ensure these expectations are met. This accountability has caused a great deal of emphasis to be placed on the setting of special education services for all students with disabilities, including those identified as EBD. This research study examines the relationship between the level of special education support and the academic achievement in reading and math of students with EBD as measured by the CRCT. The following chapter reviews the literature that is related to this research including the history of services that are provided to student identified as EBD. Chapter 3 explores the methodology used for this research study, while the analysis of the data is discussed in Chapter 4. Chapter 5 summarizes the findings of the research and discusses the recommendations and ideas for further research.
CHAPTER TWO: REVIEW OF THE LITERATURE

Students that are identified as having a disability have increased significantly over the past 35 years. According to the 24th Annual Report to Congress on the *Implementation of the Individuals with Disabilities Education Act* (IDEA), states served 5,775,722 students ages 6 through 21 under IDEA in 2000-2001 (U.S. Department of Education, 2005). Of that number, approximately 474,000, nearly 18% of those students were identified as students with EBD. This represented less than 1% of the entire student population in 2000-2001. However, according to the National Center for Educational Statistics (2011), the total percentage representation of students with EBD has held relatively consistent since 1976. As the total population of students served through IDEA has grown, so has the population of students identified as EBD. Instead, the *Report of the Surgeon General’s Conference on Children’s Mental Health* (U.S. Department of Health and Human Services, 2000) proposes the actual number of students with EBD is much higher. The prevalence estimates identify that between 3%–20% of students are EBD, with conservative estimates nearing 6% (Kauffman & Landrum, 2006). This suggests that many of the children and youth who could qualify for service under IDEA may not be identified and may not receive adequate supports to assist them with emotional and behavioral challenges they face both in and out of school settings.

Throughout the years, educators have been faced with difficult decisions regarding best practices in meeting their educational and behavioral needs as well as placement decisions as to where this education should occur. Thus, a continuum of service can be as varied as the students receiving services. Determining which
educational services are appropriate for each student is the responsibility of the IEP team.

One of the components of the IDEA is that it affords students with disabilities (SWD) the right to be educated with their non-disabled peers in the LRE to the maximum extent appropriate. IDEA also offers SWD access to a full continuum of services, but it is up to the IEP team to determine the LRE for each individual student. The team is also charged with determining the supports and accommodations necessary for participation in the LRE, in addition to any other special education services that may be needed. The No Child Left Behind (NCLB) Act of 2001, insists that schools take responsibility for ensuring that SWD make AYP (Yell et al., 2006). Schools are required to provide students with identified disabilities access to the general education curriculum at their assigned grade levels so that these students meet standards of proficiency on standardized assessments (Yell et al., 2006). Both IDEA and NCLB require schools to determine effective practices so that SWD can be successful in general education classes alongside their peers without disabilities.

IEP teams have been afforded the daunting task of determining the most appropriate educational placement for students with disabilities. Many factors are taken into consideration in meeting each student’s educational and behavioral needs. Teams are made up of many individuals including parents, general education and special education teachers, and a representative of the local education agency. When appropriate, related service providers, outside agencies, and the students themselves are included on the IEP team. While a significant responsibility of the IEP team is to determine the setting and level of special education support needed to meet the student’s needs, Hocutt (1996) found there is no compelling evidence in the literature that
placement, in and of itself, is the critical factor in student academic or social success; the classroom environment and quality of instruction have more of an impact than placement has on the success of students with disabilities. Moreover, the environment in which students with EBD are taught may have a profound effect on their academic and behavioral success. It is left up to this team of individuals to consider many factors and review pertinent data and to determine the setting and the level of support needed for the student to perform successfully both academically and behaviorally (Hocutt, 1996). It is the expectation that the IEP team identify the necessary supports to enable them to achieve with a specifically designed level of special education support and in the most appropriate setting to meet their academic and behavioral needs. While IDEA mandates that the team’s consideration begins with the LRE, for students with EBD, this task can be even more challenging as many other factors play into the decision making process for these students. These factors may include resources, administrative support, teacher training, teacher attitudes, and tolerance and often can impact the setting and level of special education support provided for the student (Cook, 2004; Idol, 2006).

**Theoretical Framework**

The Social Ecology Model and the work of Urie Bronfenbrenner provide the basis and the theoretical framework for this research study. This framework recognizes the importance of the larger environment on child development. The profound effect that religion, ethnicity, and social class play in the development of a child is evident. Bronfenbrenner (2005) indicates the importance of the structured aspects of the environment that function to enhance or inhibit the processes of making human beings human. Thus, environment has a major impact on the development of a child and should
be given great consideration in service setting while meeting the academic and behavioral needs of students EBD.

The works of Bronfenbrenner and the Social Ecology Model provided the basis of the works of James Comer and his development of the model for the school setting. In the Yale School Development Program, Theory of Change, classroom factors have a direct impact on student academic achievement factors, student behaviors, and student attitudes. Students’ environments profoundly affect their developmental processes. This includes their school, home, and community environments. These environments are shaped by social and educational policies that in turn impact school climate and cultural factors as well as school organizational factors, which, in turn, impact the classroom, and, eventually, the students who are served in those classrooms. Educational reforms and policies such as NCLB and IDEA force educators to closely examine the needs of all students in their educational environment and respond accordingly to those needs.

In one of the first studies noted, Hallahan and Kaufman (1995) recognized the importance of viewing special education services through the social ecology lens. By doing so, educators are able to transform the environments in which students with EBD are served in hopes of meeting both their academic and behavioral needs. With guidance through such policies, educators have significantly modified the environments of most students with disabilities; however, as late as 2009 students with EBD were still educated in an environment separated from their non-disabled peers at a much higher percentage (National Center for Educational Statistics, 2010.)

Changes in systems and policies are difficult for organizations. Schlechty (2001) indicates that systematic reform affects the social structures and the cultures in which
these structures are imbedded, but they often fail to change the people within these systems. In order for this to occur, it is essential for there to be a commitment toward the acceptance and diversity of all learners including changes in the environments in which students with EBD are served.

**History of Special Education Services**

Significant changes have taken place in the identification and services provided to SWD over the past number of years. In 1975, Congress enacted Public Law 94–142, the Education for all Handicapped Children Act (EHA). Prior to this, SWD were not permitted to be educated in the same classrooms and often times not in the same schools as their non-disabled peers (Yell et al., 2006). According to the National Center for Educational Statistics (2011), the number of students identified as having a disability has almost doubled. In 1976, they identified 3,694,000 students as having some type of disability to an astonishing 6,483,000 by the year 2009.

Over the years, EHA has been reauthorized numerous times to improve upon the educational needs of individuals with disabilities. In 1990 EHA was renamed IDEA with significant improvements that focused on the identification and education of SWD. IDEA ensures services to children with disabilities throughout the nation. It governs how states and public agencies provide early intervention, special education, and related services to eligible individuals with disabilities (Yell et al., 2006). Yell et al. (2006) discuss the implications to special educators, administrators, and teacher trainers because of the crucial importance of the IDEA to SWD. They indicate that school personnel must be aware of the changes and challenges that these amendments pose to educators. This
awareness must occur in order to meet the needs of all students in the general education setting, especially those that have been identified as having a disability.

As outlined by IDEA, individuals with an identified disability are entitled to a Free Appropriate Public Education (FAPE). FAPE is defined as an educational right of disabled children in the United States and is guaranteed by the Rehabilitation Act of 1973 and IDEA. FAPE is defined as an educational program that is individualized to meet the specific needs of a child. It is guaranteed to provide the child with access to the general curriculum, in accordance for them to meet the grade-level standards established by the state, and from which the child receives educational benefit. The idea behind FAPE, according to the law, is that the identified students with disabilities (SWD) receive supports and services that are designed to meet the individual and unique needs for their educational benefit (Yell, et al., 2006).

In recent years, states have moved to a three to four tier model for identifying and assisting students struggling both behaviorally and academically. Sandomierski, Kincaid, and Algozzine (2008) discuss the importance of the response to intervention (RtI) model when dealing with students experiencing behavioral problems. RtI is causing a paradigm shift in the thinking of educators and the manner in which they are including students with behavioral disorders in the general education setting. General education teachers and administrators are being required to take a more proactive approach to meeting the behavioral needs of these students prior to the intervention of special education services. Teachers are encouraged to provide students with a positive behavior support based on the problem-solving model to prevent ongoing behavior problems in the school and classroom setting (Sandomierski et al., 2008). At the basic level, tier one, all students are
provided with the same basic components of the positive behavioral support system and classroom management strategies. It is as the students continue to experience behavioral difficulties that they move up the tiers. Tier two is a targeted group that represents a small percentage (10%–15%) of the school population. It is in this level or tier that students are provided with a strategy or intervention to decrease the frequency of the misbehavior. Progress monitoring occurs to measure the effectiveness of the strategy that has been implemented (Bradley et al., 2008). Teachers are asked to collect data and make changes as needed to meet the needs. As the intensity of the behavior increases over a period of time, students move through the tiers with a greater intensity of interventions and progress monitoring (Bradley et al., 2008). More often than not, it is the general education teacher who is providing the targeted instruction and collecting the data on the effectiveness of the intervention. If the disruptive behavior continues, the teacher may then consider a special education referral. It is at the point the child may be found eligible for special education services. It is then up to the IEP team to decide the setting and level of special education support that is essential for the student’s behavioral and academic success.

According to FAPE, supports and services for the child can be as unique as each child. The law requires IEP teams to consider a continuum of services when determining educational benefit with the services occurring in the LRE (Sacks, 2009; Valle & Connor, 2011). Historically, researchers have argued that these considerations are being made as a process-driven system where special education is the response to deficits within the child (Hehir, Stariha, & Walberg, 1991; Nilholm, 2006). Little thought is given to modifying the actual environment in which the student is being served, rather the setting
where the student is served is changed. The emphasis has been placed on ensuring that students are included in settings for the sake of inclusion rather than for the educational benefit of the student. The idea for an inclusive setting came as the initiative for SWD to be included in statewide assessments.

For many years students with an identified disability were excluded from participation in statewide standardized testing. However, through each reauthorization of IDEA, a stronger accountability has been established for SWD to demonstrate yearly academic achievement and to meet identified requirements for AYP. Thus, SWD have become a focal point for many schools across the nation. Mooney, Denny, and Gunter, (2004) attribute this focus to NCLB and the pressures that have been placed on school districts to have all students reading on grade level by third grade.

**History of Special Education Services for Students with EBD**

The history of individuals working in the field of EBD began in the 1700s with Jean Itard’s work with Victor, the “wild boy of Averyon” (Lane et al., 2011, p.425). His student, Edward Seguin, brought this research to the United States and furthered Itard’s work. Later he developed a humanitarian/educational methodology for working with the mentally ill and individuals with severe cognitive disabilities and challenging behaviors (Lane et al., 2011).

It was in the 1940s and 1950s that schools began to be established across the U.S. to treat and educate children and youth who displayed significant behavioral difficulties. Lane et al. (2011) indicate that while there had been no formal classifications to identify students as EBD, there began a significant amount of work and research in the treatment and education of these students who displayed significant behavioral deficits. In 1949,
Leo Kanner was one of the first to actually provide a label for the students identifying them as having “early infantile autism” (Lane et al., 2011, p.425). It was his work that helped to further separate students who were mentally ill from those with behavioral disorders.

In the 1960s names such as Fritz Redl, Albert Bandura, and Frank Hewett surfaced as they began to publish research on behavioral approaches to meeting the instructional needs of students with EBD. Much of this work was based on the operant conditioning research of B. F. Skinner and his students (Lane et al., 2011). It was also during this time that the Council for Children with Behavioral Disorders was established for the purpose of training educators to work with students with EBD. It was after the establishment of this organization that the field of education began to see an increase in the research surrounding the EBD population.

In the last 30 years, there has been a significant amount of research surrounding the field of special education including students with EBD. Researchers have explored behavioral interventions that have been put in place to support students with EBD. They have explored teacher effectiveness in meeting the needs of students with EBD, and research has been devoted to social skills. With the focus primarily on behavioral support and interventions, it has not been until recent years that researchers have began to focus on the academic performance and actual education of students with EBD (Conroy, Stichter, Daunic & Haydon, 2008; Kauffman & Landrum, 2009; Lane et al., 2011; Nelson & Kauffman, 2009).

Lane et al. (2011) established that while research over the past 30 years has explored both behavioral and academic interventions, much more work in the field of
educating students with EBD is required. In more recent years, an inclusive philosophy has changed the design and structure of educational programs for SWD and the research that surrounds the field. This research has altered the organizational response to students with difficult behaviors.

As noted previously, federal legislation and policy have also brought about some of these changes as well. This can, however, differ for students identified as EBD.

While there has been a significant amount of research and literature supporting practices for including students with EBD, there was little evidence of peer-reviewed documents on the relationship between special education services for students with EBD and their academic achievement. There were some qualitative studies that have been conducted on students with disabilities, with regard to service and placement. However, none have specifically focused on students with emotional and behavioral disorders.

Students with EBD are much more likely to be served in separate classes away from their peers than any other category of disability. According to Bradley, Henderson, and Monfore (2004), approximately one-third (31%) of all children with emotional and behavioral disorders are served in more restrictive settings. When compared to students from other disability categories, that percentage was significantly higher than the average (19%). Given these statistics, research must be done to explore the relationship between academic achievement and the level of special education support that students with EBD receive.

The degree of intensity and the level of special education services provided to students usually increase as students move to more restrictive environments. Kauffman, McGee, and Brigham (2004) insist that individuals assume that the severity of disability
also fluctuates along the continuum. Much debate has ensued among professionals who consider either more restrictiveness or more inclusiveness to be desirable. Providing students with EBD less support would possibly impact the learning of others, a topic for future research. Given this discussion, there are two theories. The first theory, according to Muscott (1995), is that educators and parents question the effectiveness of students with EBD segregated from their peers in separate classes. This thought is primarily from the parents of students identified as EBD and their desire for their children to have models for appropriate behaviors and socialization. Kauffman, Bantz, and McCullough (2002) present the second theory that is mostly argued by general educators and parents of students without disabilities. These individuals feel that students with EBD should be educated in separate settings as their presence prevents the rest of the students from accessing the general education. It is often both schools of thought that are discussed throughout IEP meetings and can, at times, prove to be a very difficult debate. Landrum, Katsiyannis, and Archwamety (2004) insist that while the overall rate of placements in the general education classroom for students identified with a disability other than EBD has increased, the incidence of such placements for students with EBD has significantly lagged behind. Research exploring such placements and levels of special education support would be beneficial in helping educators make such decisions.

**IEP and FTE Processes in Georgia**

Services that are afforded to SWD through special education are supported through a continuum as determined through their IEPs. Through this document, a team of individuals determine not only the goals and objectives that the teacher must implement and monitor, but also decide on the amount of time that the student will
receive and the setting in which these services will occur. While several factors influence placement decisions, often schools systems used mandates such as IDEA and NCLB to guide them. Through these mandates, there is the expectation that all students, including those identified as EBD, are to be educated to the fullest extent appropriate and with their non-disabled peers (Sacks, 2009; Valle & Connor, 2011). However, researchers state that general education teachers may be far more limited than trained special educators in their instructional flexibility due to the constraints of such mandates and the accountability they require (Brigham, Gustashaw, Wiley, & Brigham, 2004).

Systems are required to monitor the amount of time that students receive special education services. This is monitored and recorded in the student’s IEP and reported to the Georgia Department of Education through FTE reports. The FTE process is used by the state of Georgia to determine the amount of state funding that each school system earns based on the special programs in which students participate. Additionally, state monitoring of student instructional environment (setting) and services is accomplished through the FTE process.

The state of Georgia identifies ten environments in which SWD may be served. While each of these environments is discussed throughout this chapter, the environments that were considered for the purpose of this research study were environments 1–3, which are given the most consideration in IEP meetings.

Environment 1 provides education to the student with a disability in the general education setting at least 80% of time. These are children who receive special education and related services outside the general education classroom for less than 21% of the school week. This may include placement or support of children with disabilities in a
general education class with special education and/or related services provided (a) within the general education class setting (i.e., supportive instruction, co-teaching), (b) outside the general education class (i.e., speech, occupational therapy, physical therapy), or (c) with special education services provided in a resource room setting (GADOE, 2010). This would equate to up to one segment of special education support provided outside of the general education setting as reported on FTE or up to six segments of special education support provided within the general education setting.

Environment 2 provides education to the student with a disability in the general education setting at least 40% of time but no more than 79% of the time. These are children who received special education and related services outside the general education classroom for at least 21% but no more than 60% of the school week. This may include children with disabilities placed in (a) resource rooms with special education/related services provided within resource rooms; or (b) resource rooms with part-time instruction in regular class (GADOE, 2010). This would equate to two to four segments of special education support as reported on FTE.

Environment 3 provides SWD instruction in the general education setting less than 40% of time. These are children who received special education and related services outside the regular classroom for more than 60% of the school week. This may include children with disabilities placed in (a) self-contained special education classrooms with part-time instruction in a regular class, (b) self-contained special classrooms with full-time special education instruction on a regular school campus, or (c) resource rooms with special education/related services provided within resource rooms for the entire day.
(GADOE, 2010). This would equate to five to six segments of special education support as reported on FTE.

Figure 1 shows the relationship between the three environments as it relates to the percentage of time that SWD may be included in the general or special education settings, the setting in which they may be served, the level of special education support in FTE segments, and the actual amount of time in minutes the student may receive that support. This figure provides a visual representation of the relationship between these terms. The figure also provides a summary of the previous information. It should be noted that this figure was created for the purpose of this research study and the school district in which the study took place.
<table>
<thead>
<tr>
<th>Special Education Environment</th>
<th>Percentage of Time in General Education</th>
<th>Percentage of Time in Special Education</th>
<th>Setting</th>
<th>Level of Special Education Support in FTE Segments</th>
<th>Amount of Time in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment 1</td>
<td>80–100</td>
<td>0–20</td>
<td>In General Education • Supportive Instruction • Co-teaching</td>
<td>&lt;1–6</td>
<td>&lt;50–300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Outside General Education • Resource • Related Services</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Environment 2</td>
<td>40–79</td>
<td>21–60</td>
<td>Resource</td>
<td>2–4</td>
<td>100–200</td>
</tr>
<tr>
<td>Environment 3</td>
<td>0–39</td>
<td>61–100</td>
<td>Self-Contained or Resource</td>
<td>5–6</td>
<td>250–300</td>
</tr>
</tbody>
</table>

*Figure 1.* The alignment of environment, setting, and level of special education support.

Based on information gathered from the Georgia Department of Education (2010). As indicated by the large arrow, the focus of this study was on the level of special education support as measured by FTE segments.
After the student is found eligible for special education through an evaluation, the team meets to develop the IEP. Several factors are taken into consideration for determining placement and services in the LRE based on this student evaluation (Valle & Connor, 2011). Valle and Connor (2011) indicate that this evaluation is a crucial part in the determination of the level of special education support services that a student with a disability will receive. Based upon this evaluation, the committee will consider the present level of educational performance, the academic and behavioral strengths and weaknesses of the student, and how he or she relates to the student’s disability. With all these considerations, the team will decide on goals and objectives for the student to address the deficits that he or she has shown in these areas. The team determines the supports that the student will need to participate with his or her non-disabled peers to the maximum extent as well as his or her participation in state and local assessments. Ultimately, the committee must determine the most appropriate setting and level of special education support for each individual student. At a minimum, the team meets yearly to give each of these factors further consideration and to make educational plans for the upcoming year.

**Special Education Services for EBD Students**

By vague definition of the disability, students identified with EBD present with internalizing or externalizing behavioral difficulties that interfere with the learning process that cannot be characterized by any other learning difficulty (Bradley et al., 2008; Sacks, 2009; Valle & Connor, 2011). In theory, students with EBD have the potential to learn; they just often do not (Bradley et al., 2008). Bradley et al., (2008), go on to indicate that students identified as having EBD are more likely to fail if interventions for
behavioral support are not put into place in conjunction with the teaching of academics. General educators indicate that this is extremely difficult to do in a setting given their perceived pressures of meeting AYP and educating non-disabled peers (Yell et al., 2006).

The following background information helps establish the settings in which EBD students are most often served. According to Gaylord et al., (2005), students with EBD often experience general educational instruction to a much lesser degree than youth with disabilities as a whole. They indicate that on average, 16% of youth with EBD take all of their courses in special education settings (compared with 9% of youth with disabilities as a whole who take only special education courses). Many of these students are served in the alternative school setting separated from their peers. These settings are generally designed to serve students who are at risk of school failure due to circumstance or ability. Many alternative schools are disciplinary in nature, but can also provide students a different option with regards to an educational setting. In addition to these settings, a high percentage of youth who are incarcerated are identified as having a disability. One study estimates that approximately 32% of youth in juvenile corrections have disabilities; of those, 46% were identified as having EBD (Quinn, Rutherford, & Leone, 2001).

LRE is defined in P.L. 108–446. This law requires that students with identified disabilities are to be educated in an environment that is the most appropriate to meet their individual needs (Heward, 2009). The IDEA regulates LRE through Monitoring and Technical Assistance 20 U.S.C. 1416(a)(3)(A). This requires that states monitor the activities of the Local Education Agencies (LEA) by specifically requiring them to develop plans that address the following: improving educational results and functional outcomes for all children with disabilities and ensuring that public agencies meet the
program requirements under Part B of the Act (U.S. Department of Education, 2009). One specific area that states are required to monitor is how and where SWD are provided special education services.

While the environment in which students are served was discussed previously, there is a consideration for a continuum of services that are available to meet both the academic and social needs of student with an identified emotional behavioral disorder. The continuum of services for consideration begins with students being served in the general education at least 80% or more per school day. This level of service may include: (a) support through accommodations and modifications, (b) inclusive support through supportive instruction provided by a paraprofessional, (c) co-teaching support provided by a special education teacher in that general education setting, or possibly (d) no special education support at all in a given setting. The student with EBD is identified through the eligibility process and the IEP team considers if the general education setting with support is sufficient to meet their needs. Accommodations and/or modifications in the general education setting may include, but are not limited to, individualized behavior plans to reduce inappropriate behaviors, assistance and interventions for academic learning difficulties, and interventions in building interpersonal relationships. These accommodations and/or modifications are most often considered after the student has received support and is able to integrate back into the general education setting rather than after the initial identification and eligibility determination. In 2008–2009, approximately 39.2% of students identified as EBD across the nation were served through this setting (National Center for Educational Statistics, 2010.)
The next level of service includes some degree of resource or pullout services. Students with EBD who are served through this model are removed from the general education setting for a portion of the day and provided instruction by a special education teacher. They are included with their non-disabled peers 40–79% of the school day. The National Center for Educational Statistics (2010) indicates that approximately 19.4% of students identified as EBD across the nation are served through this setting.

Students with increasingly more severe behavioral and/or academic difficulties are even more segregated from students without an identified disability. These students receive their instruction less than 40% of the day in a general education setting. The National Center for Educational Statistics (2010) reports that approximately 23.2% of students identified as EBD across the nation are served less than 40% of the day in a resource or pull out model, 13.1% in a separate school for SWD and 2% in a separate residential facility. They also report that 1.1% of students with EBD receive services through homebound placements and 1.9% receives services in a correctional facility. Given these statistics, a total of 41.3% of students with EBD spend little to no time with students that are not disabled. These settings would be considered some of the most restrictive for students with an identified disability. When compared to the services of students with other identified disabilities, this is significantly different, in that the goal is that 90% of SWD receive at least 80% of their instruction in a general education setting.

**Variables that Impact the Level of Special Education Support and Academic Achievement**

While there have been studies to independently explore the variables that impact the placement of children and the academic achievement of students with EBD, little
research has been done to link the two. A few dated studies on facilities for special educational care have suggested that demographic variables such as low socioeconomic status, ethnicity, age, gender, and IQ may contribute to the prediction of educational placement at a more restrictive level or with a higher level of educational support (Cohen et al., 1990; La Paro, Olsen, & Pianta, 2002; Westendorp, Brink, Roberson, & Ortiz, 1986; Robertson et al., 1998; Kauffman, Cullinan, & Epstein, 1987). More recent studies have examined culture, teacher attitudes, and training as variables that may impact the special education services that a student with EBD receives (Brown, 2009; Friend & Pope, 2005; Harrington, 2011). Despite minimal research, there remains a lack of understanding about which variables determine differences in educational placement decisions. Such variables are important to identify because, unlike static variables, they can be used for intervention purposes.

Brofenbrenner (2005) insists that the environments of the school and classroom culture play a large part in the success of students, especially those with behavioral difficulties. At times, children with behavioral difficulties challenge these values, traditions, and relationships causing educators to become frustrated and to request that they be removed from the classroom settings, thus placing them in more restrictive settings than their disabled peers. In order for these students to experience success, teachers must be afforded with training to ensure the academic success of all students. Often a shift in the culture of the school is necessary for this to take place. This shift requires educators to closely examine policies and procedures in contrast to personal preferences that are deeply embedded in their belief systems as they relate to students.
with behavioral difficulties, as indicated through the theoretic framework (Brofenbrenner, 2005).

The shift in culture must come from the top down (Brofenbrenner, 2005). If administrators do not support the inclusion through the adoption of some of these practices, teachers will not see the value in including students with EBD in their classrooms. Teachers’ tolerance levels for inappropriate behaviors will most likely be reduced; they will be less inclined to participate in the work that is required for successful collaboration and inclusion of students with EBD. This impacts the services provided to students with EBD, resulting in more support than may be necessary. Research on the services that SWD are provided over the continuum of special education demonstrates that students with EBD are usually placed in educational settings of a more restrictive type (Cullinan, Epstein, & Sabornie, 1992; Denny et al., 1995; Stoutjesdijk & Scholte, 2009) simply because EBD is considered the most challenging group of disabilities to be handled in regular education regardless of whether additional support is available (Hallenbeck, Kauffman, & Lloyd, 1993; Kauffman & Landrum, 2009). So while there are several variables or factors that may impact decisions regarding the special education services those students with EBD receive, the end-note is often a higher level of support than may be required.

In the area of academic achievement, according to Hocutt (1996), research indicates that various program models, implemented both in special education and general education, can have moderately positive academic and social impacts for students with disabilities. However, Trout, Nordess, Pierce & Epstein (2003) indicate specifically for students who have been identified as EBD that there is little research regarding their
academic achievement when served with different levels of support and instructional settings.

Shapiro, Miller, Sawka, Gardill & Handler, (1999) report the findings of a three-year project examining the impact of an experiential in-service program and consultation process in facilitating the inclusion of students with EBD into general education settings. In their research, a total of 25 school districts were randomly assigned to one of three conditions. The researchers provided one set of participants with an intensive in-service program followed by consultation to help implement specific intervention strategies learned through the in-service for enhancing inclusionary practices for students with EBD. They provided the second group with the same in-service, but their consultation was delayed, at which time they were instructed to also implement the interventions for targeted students. The third group served as a wait-list control.

Their results showed a correlation between immediate implementation of the consultation process for successful implementation of learned interventions. Their findings suggest that for overall success, consultation and support services must be provided to general education staff for enhancing effective inclusionary practices for students with EBD. Their findings also suggest that for future research, studies must involve more inclusive practices to determine which practices make students with EBD successful with less direct support. While dated, little has been done to follow up with providing students with EBD successful experiences in the general education setting (Shapiro et al, 1999).

Trubowitz (2005) identifies the value of collaboration among all stakeholders to impact school culture. Through their collaborative efforts, colleges, teachers, parents,
administrators, and students can work together to create a climate in which there is a thinking atmosphere, open communication, outside influences, a common language, and teacher autonomy. Together these essential elements can impact not only the classroom culture, but also that of the school, school system, and community.

Trubowitz’s (2005) work sheds a great deal of light on a problem that occurs in many schools throughout the country. Often administrators propose a top down model of school change, and the ownership of the solution evades its teachers. Teachers, as well as other stakeholders, need the opportunity to search for the root causes of school issues that may include curriculum, daily operations, or student learning. By searching for the root causes that effect school cultures, and student learning, administrators can avoid the quick fixes that provide only temporary solutions. There are many obstacles to building a positive school culture. By being aware of these obstacles, administrators can avoid the traps that keep them and their schools within the status quo.

The research of Wagner et al. (2006) provides a national perspective on the schools and school programs for students with EBD who are served in special education. Wagner et al. (2006) gathered data that helped describe school characteristics and resources that were available to students with EBD. Their findings indicate that students with EBD generally attend larger schools in which there are a higher proportion of students who receive special education services. They also note that while most students with EBD spend a portion of their day with their non-disabled peers, they are included in such classes less often and are likely to have teachers who feel unprepared to work with them. Finally, students with EBD are likely to receive accommodations in their general
education classes; however, they are unlikely to receive academic support services outside the classroom, such as tutoring, to help them succeed.

**Academic Interventions and Specialized Instruction**

Through NCLB and IDEA students with identified disabilities are required to meet set accountability measures. Reform for state standards, such as the Georgia Performance Standards (GPS) and states required performance indicators for academic outcomes, have been essential for SWD including those identified students with EBD (Katsiyannis, Zhang, Ryan, & Jones, 2007; Thurlow & Wiley, 2006). In order for students with EBD to perform with academic success, they are often required to receive specialized instruction that comes with services through the students’ IEPs.

According to Eber, Sugai, Smith, and Scott (2002), effective school-based programming that meet set state standards continues to challenge educators for students with behavioral difficulties. Research indicates that SWD can perform well academically on state standards when they are provided with appropriate instructional interventions and access to the curriculum (Carr-George et al., 2009; Hardman & Dawson, 2008; Katsiyannis et al., 2007). However, there is little research for the EBD sub-group, generally the research for this population has focused solely on student behavior (Barton-Atwood, Wehby, & Faulk, 2005). Brofenbrenner’s (2005), framework suggests, policies must be set to modify the environment to provide collaboration among local and state agencies, families and schools so that effective interventions can be put into place to assist educators in meeting the educational and behavioral needs of their students.
Behavioral Interventions

Unlike research in the area of academic supports for students identified as EBD, the research studies focusing on behavioral interventions is abundant (Eber et. al., 2002; Gulchak & Lopes, 2007; Lane et. al., 2011). Shapiro et al. (1999) indicated that to provide effective services to children with EBD, it is essential that school personnel build substantial knowledge, expertise, and experience in the development, implementation, and evaluation of intervention procedures specifically known to be effective at addressing the needs of students with EBD. The environment in which students with EBD are served can have a critical impact on all aspects of academic and behavioral success. Thus, the importance of the IEP team decision, with regards to setting and amount of special education services that the EBD student receives, should not be overlooked.

Research identifies the following components of an effective classroom in addressing the behavioral needs of students with EBD: modeling, self-control, and social skills training (Eber et. al. 2002; Gulchak & Lopes, 2007; Lane et. al., 2011).

Summary

Researchers have yet to fully explore the influence of NCLB on proactive and positive interventions for students with EBD in the general education classroom. The review of literature provided in Chapter 2 represents works that are relevant to meeting the academic and behavioral needs of students with EBD. The chapter began with a review of legislation and policy for students with identified disabilities, including those identified as EBD. It then provided historical references about educational placements and the development of the IEP. The review continued with literature that was relevant to the limitations of meeting the needs of students with EBD from systemic and
ecological perspectives. The chapter concluded with a review of relevant academic and behavioral interventions that impact student success.
CHAPTER THREE: METHODOLOGY

This study was a quantitative research study of the academic achievement of students who displayed behavioral difficulties, who were identified as EBD, and who were provided varying levels of special education support and settings as determined by the IEP team. Settings included: (a) consultative services with the special education teacher, (b) supportive instruction from a paraprofessional, (c) co-teaching support with both a general educator and a special educator, (d) resource, (e) self-contained, or (f) residential (Skiba et al., 2008). This study examined the level of special education support that the student with EBD received as it related to the academic achievement in reading and math. For the purpose of this study, level of support is operationally defined as the amount of time that a student with EBD receives as determined in his/her IEP. Academic achievement in reading and math was measured by the Georgia CRCT to determine if the amount of special education support that the student with EBD was provided shows a relationship.

The study was based on the following: If the services (setting and amount of time receiving special education support) that a student with EBD receives are sufficient, gains should be made both academically and behaviorally (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005; Janney & Snell, 2000; Johns & Guetzloe, 2004; Mathes, Fuchs, Roberts, & Fuchs, 1998; Tobin & Sugai, 1999; Villa & Thousand, 1995). This study focused specifically on the level of special education support (amount of time) that a student with EBD received in relation to their academic achievement in reading and math.
Teachers and students are affected by the decisions of NCLB (2001) and the regulations set forth by IDEA to hold schools accountable for meeting academic achievement standards in reading and math for grades one through eight and to mandate that SWD participate in state-wide assessments.

The purpose of this study was to determine if there was a relationship between the level of special education support for students with EBD and their academic achievement in reading and math as measured by performance on the CRCT. Chapter 3 includes information about the methodology and design of the study and is divided into the following sections: research design, participants, setting, instrumentation, procedures, and data analysis.

**Research Design**

The design used in this study was a correlational research design. This design was selected to determine whether and to what degree a relationship existed between achievement scores and level of special education support of students with EBD. A thorough review of the literature revealed that little research has been done exploring a relationship between amount of special education service and academic achievement. Due to the lack of research exploring this specific relationship, correlational research design was deemed to be the most appropriate statistical analysis. According to Gravetter and Wallnau (2008), correlational research can determine (a) predictions for populations as a whole, (b) validity to determine if a measurement is credible, (c) reliability in determining the relationship between the two measurements, and (d) theory verification in which researchers are able to make specific predictions based on the correlation between two variables.

A correlational research design was used to determine if there was a relationship between the level of special education support for EBD students and student achievement.
in reading and math as measured by the CRCT. This research design was chosen because it is used to measure and describe a relationship between two naturally occurring variables without attempting to manipulate or control the variables (Gravetter & Wallnau, 2008). Relationships were explored between groups of sixth, seventh, and eighth grade students and examined the level of special education support that was provided to the students with EBD. Archived data from the 2007–2008, 2008–2009, and 2009–2010 school years were retrieved and analyzed.

Ary, Jacobs, Razavieh and Sorensen (2006) contend that while correlation does not necessarily indicate causation, it may be attributed to an intrinsic relationship between the two variables. A correlation study is useful in determining and describing a relationship between two sets of measures. In this research, the dependent variable was student achievement in reading and math (as measured by the CRCT) for sixth, seventh, and eighth grade students identified as EBD and the independent variable was the number of service segments that they were served through special education in a given year.

**Research Questions and Null Hypotheses**

The 2008, 2009, and 2010 CRCT scaled scores of students identified as EBD who were provided varying levels of special education support were analyzed to address the following questions and null hypotheses:

**Research Question 1:** Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

**Null Hypothesis (H₀₁):** There will be no significant relationship between the number of special education instructional support segments received for sixth grade
students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 2: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H02): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 3: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H03): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 4: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?
Null Hypothesis (H04): There will be no significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 5: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009 and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H05): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Research Question 6: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H06): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

Participants

For the purpose of this research, students in grades six through eight who were identified as EBD and provided services in the 2007-2008, and/or 2008-2009, and/or
2009-2010 school years were selected as participants. For a child to be identified as having an emotional behavioral disorder, he or she must meet the criteria and be found eligible under the requirements established by the state of Georgia. The Georgia Department of Education (2012) defines an emotional and behavioral disorder as an emotional disability characterized by (a) the inability to build or maintain satisfactory interpersonal relationships with peers and/or teachers; (b) an inability to learn which cannot be adequately explained by other factors; (c) consistent or chronic inappropriate types of behavior or feelings under normal conditions; (d) a displayed pervasive mood of unhappiness or depression; or (e) a displayed tendency to develop physical symptoms, pains, or unreasonable fears associated with personal or school problems. For students to be identified as EBD, they must exhibit one or more of these characteristics and their behavior must interfere with their education to a degree such that special education services are necessary (Georgia Department of Education, 2012).

The sample was that of convenience in that all students identified within the system as EBD in grades sixth through eighth from 2007–2010 and had CRCT scores for any of these years were selected for participation. The sample was assigned into grade level groups to analyze data. The sixth grade sample consisted of a total of 53 students, the seventh grade sample consisted of a total of 42 students, and the eighth grade sample consisted of a total of 19 students. The overall total of participants for the study was 81 students. Students who were in the selected group with more than one year of data in the data set were included in multiple analyses. This explains why the numbers for each grade level do not add up to the total number of students that participated in the study.

Of this sample, 23 (28%) female students and 58 (72%) male students were
identified for a total of 81 students. The demographic breakdown of the sample included, two (2%) of the students were identified as multiracial, 65 (80%) white, four (5%) Hispanic, seven (9%) Black and three (4%) Asian. This sample closely resembles the overall system demographic data, which is identified in the following section. Of the sample, some participants may be considered for multiple years of data as they progressed through grade levels over the years in which data were collected.

**Setting**

This study took place in a rural northeast Georgia school district. Table 1 shows demographic information for Northeast Georgia School District (NGSD). SWD at the system level did not meet AYP requirements in the area of academic achievement for the 2008 and 2010 school year.
Table 1

*Northeast Georgia School District Demographic Information*

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=6969)</td>
<td>(N=6928)</td>
<td>(N=6928)</td>
</tr>
<tr>
<td>n</td>
<td>n%</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>American</td>
<td>11</td>
<td>0.16</td>
<td>12</td>
</tr>
<tr>
<td>Asian</td>
<td>188</td>
<td>2.74</td>
<td>189</td>
</tr>
<tr>
<td>Black</td>
<td>135</td>
<td>1.97</td>
<td>133</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1369</td>
<td>19.97</td>
<td>1436</td>
</tr>
<tr>
<td>Multi-</td>
<td>255</td>
<td>3.72</td>
<td>287</td>
</tr>
<tr>
<td>Pacific</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>4898</td>
<td>71.44</td>
<td>4912</td>
</tr>
<tr>
<td>SWD</td>
<td>892</td>
<td>12.80</td>
<td>872</td>
</tr>
<tr>
<td>ED</td>
<td>3312</td>
<td>48.31</td>
<td>3550</td>
</tr>
</tbody>
</table>

*Note.* SWD = Students with Disabilities; ED = Economically Disadvantaged

Data were collected from the October 2007, 2008, and 2009 Georgia FTE counts.

The study takes place in two middle schools in NGSD. Within each of the schools are varying levels of support and inclusive practices, some of which include students with emotional behavior disorders and some that provide students with instruction in a more restrictive setting such as resource, self-contained, or separate school setting. There is a process by which students are determined eligible for services in the self-contained setting on and above the placement decisions made by the IEP team. The school district also partners with an off-site psycho-educational center that accepts students with EBD who display extreme behaviors. This study included four students who had been served through this special education service model. As with the self-
contained setting, there is an application process by which students are considered for placement in the psycho-educational center, however, the end result is a decision that is made by the IEP team.

**Instrumentation**

Students’ individual CRCT scale scores in the area of reading and math were assessed for the purpose of determining academic achievement. Students in grades one through eight were mandated by the state of Georgia to participate in this assessment. With this assessment, educators are able to determine the level of understanding that their students have in mastering grade level performance standards. The assessment is aligned to the GPS and indicates how well students have mastered the curriculum at a given grade level. For this study, the CRCT was used to assess student achievement for grades six through eight.

CRCT data are represented in reliable and valid scores (Georgia Department of Education, 2008, 2009, & 2010). The Georgia Department of Education (GaDOE) indicates that, while validity is the most important consideration in the test development process, a test cannot be valid without a high degree of reliability. The reliability of the CRCT was assumed due to the reliability information provided by the Georgia Department of Education (2008a, 2009b, 2010c). The report provides reliability information using Cronbach’s alpha. The reading scores for grades sixth through eighth yielded reliability coefficients ranging from .86 to .88 and .91 to .93 in the area of math. Reliability coefficients reported are consistent with past tests, suggesting the assessment is reliable (Georgia Department of Education, 2008a, 2009b, 2010c). The Georgia Department of Education (2008, 2009, & 2010) indicates that by attending carefully to
each phase of the test development process, the GaDOE can ensure that the CRCT is a valid instrument. They insure this by aligning the CRCT with the state’s curriculum and relying on input from Georgia educators at every phase of test development.

The Georgia Department of Education (2012) expresses the scores for each student as a performance level. There are three performance levels that are represented by a specific range of scale scores. These performance indicators identify whether the student exceeds (E), meets (M), or does not meet (DNM) the standards for the GPS particular to their grade level. A student who exceeds the standards has earned a scaled score of 850 and above. A student who meets the standards has earned a scale score of between 800-849. A student who does not meet the standards has earned a scale score of below 800 (Georgia Department of Education, 2012).

**Procedures**

Initially, permission was obtained from both the superintendent in NGSD (see Appendix A) as well as the special education director (see Appendix B) in order to complete the research study. IRB approval (see Appendix C) was sought and granted for the research. A list of student identification numbers was requested and granted from the special education department. This list consisted of students who had been determined EBD, but contained no identifiable information. This list was then submitted to both the technology department for the school system and Pioneer Regional Educational Service Agency (RESA) to obtain the raw data needed for the study. The technology department for NGSD provided the number of special education instructional segments that were assigned to each student in the years studied based upon FTE reports for the given years. FTE reports were used to determine the level of special education support that the student
received. The specific report that was selected for use in determining setting and number of special education support segments was the October count for 2008, 2009, and 2010 which the state of Georgia uses to determine the amount of services for students with disabilities. Numbers ranged from 0 through 6 segments of service in a given day. It should be noted that for FTE purposes anything less than one full segment is reported as zero, but this does not equate to no services provided; less than one segment of service indicates less than 45 minutes of service. One full segment is 50 minutes or more.

Pioneer RESA’s data analysis department provided CRCT scale scores in reading and math for the years studied. Data from the spring administration for 2008, 2009, and 2010 were then analyzed in order to answer the research questions designed for this study. The data were then organized in a manner that allowed for analysis and disaggregated by grade across years to group sixth, seventh, and eighth grade students together. The data were then analyzed using the Pearson-product correlation, which is described in the following section.

Data Analysis

This quantitative correlational study examined 2008, 2009, and 2010 reading and math CRCT scale scores and level of special education services that was provided to determine if and to what degree a relationship existed. Descriptive statistics were calculated for each grade level group for level of special education support and CRCT results. The Pearson-product correlations were calculated for the number of segments of special education service and the scale scores for the CRCT in reading and in math. The independent variable was the amount of special education support segments that the EBD students received as determined by the IEP team. The dependent variable was academic achievement in reading and in math as measured by the 2008, 2009, and 2010 CRCT.
This statistical analysis was used to allow the researcher to determine if the variable, level of special education support, could serve as a predictor of academic achievement as measured by the reading and math CRCT. The Pearson-product correlation was selected to determine the degree of the relationship between the predictor variable of level of special education support and the outcome variable of reading and math scale scores on the CRCT. The Pearson-product correlation is a commonly used statistical measure that can depict a definite linear relationship (Graveteer & Wallnau, 2007).

While the researcher is aware that the use of the information based on the results of this study could be limited by using the Pearson-product correlation, it was determined to be the best statistical measure for determining a relationship between these two variables. The Pearson-product correlation simply describes if a relationship between two variables exist; it does not explain why the variables are related or why they are not related (Graveteer & Wallnau, 2007). This methodology was chosen to help fill a gap in the literature by determining if there was a relationship between student achievement and the level of special education support for students with EBD (Gersten, Baker, Smith-Johnson, Flojo, & Hagan-Burke, 2004; Kauffman, McGee & Brigham, 2004; Keenan, 1997; McFarland, 2001; Miltenberger, 2004; Neary & Halvorsen, 1995). Should a relationship between the variables occur, further research will be needed in order to determine causation.

Summary

Chapter 3 provided a description of the methodology used throughout this quantitative correlational research study. Participants included NGSD students with EBD in grades six through eight who took the CRCT in the spring of 2008, 2009, and/or 2010.
A correlation design was selected to determine if a relationship existed between academic achievement and the level of special education support for the participants in the study. Pearson-product correlation was used to analyze the data. Chapter 4 will present the results of the study.
CHAPTER FOUR: RESULTS

The purpose of this study was to determine if there was a relationship between the level of special education support for students with EBD and their academic achievement in reading and math as measured by performance on the CRCT.

This chapter is organized into four sections: (a) demographic information, (b) assumption tests for each of the hypotheses tested, (c) data analysis and results of a Pearson correlation coefficient that measured the relationship between sixth through eighth grade reading and math CRCTs and special education instructional support segments, and (d) a summary of the results.

Demographics

The participants for this study were 81 students identified as EBD from NGSD. All students in grades six through eight were identified as EBD through Georgia special education eligibility requirements, and provided services in the 2007-2008, and/or 2008-2009, and/or 2009-2010 school years were selected. The descriptive statistics of demographic information are provided in the previous chapter.

Table 2 displays the descriptive statistics for variables of interest. The data in this table show the mean scale scores for academic achievement in reading and math as well the mean special education support segments for grades six through eight. The data show that the test score ranges did not vary significantly among the grade levels and the mean scale scores in each content area were similar. Interestingly, the math mean scale scores for each grade level were all in the does not meet range (DNM) while all of the reading
mean scale scores were in the meets (M) range.

Table 2

*Descriptive Statistics for the Independent and Dependent Variables*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th Grade Reading CRCT</td>
<td>53</td>
<td>816.91</td>
<td>21.30</td>
<td>0.28</td>
<td>-0.74</td>
<td>83.00</td>
</tr>
<tr>
<td>6th Grade Math CRCT</td>
<td>53</td>
<td>799.15</td>
<td>33.61</td>
<td>0.74</td>
<td>1.39</td>
<td>177.00</td>
</tr>
<tr>
<td>6th Grade Support Segments</td>
<td>53</td>
<td>2.74</td>
<td>2.41</td>
<td>0.16</td>
<td>-1.59</td>
<td>6.00</td>
</tr>
<tr>
<td>7th Grade Reading CRCT</td>
<td>42</td>
<td>809.21</td>
<td>16.67</td>
<td>0.20</td>
<td>-0.32</td>
<td>68.00</td>
</tr>
<tr>
<td>7th Grade Math CRCT</td>
<td>42</td>
<td>788.95</td>
<td>18.11</td>
<td>0.53</td>
<td>-0.30</td>
<td>74.00</td>
</tr>
<tr>
<td>7th Grade Support Segments</td>
<td>42</td>
<td>3.50</td>
<td>2.30</td>
<td>-0.37</td>
<td>-1.30</td>
<td>6.00</td>
</tr>
<tr>
<td>8th Grade Reading CRCT</td>
<td>18</td>
<td>811.94</td>
<td>18.88</td>
<td>1.02</td>
<td>0.79</td>
<td>72.00</td>
</tr>
<tr>
<td>8th Grade Math CRCT</td>
<td>19</td>
<td>774.21</td>
<td>23.29</td>
<td>0.96</td>
<td>0.79</td>
<td>72.00</td>
</tr>
<tr>
<td>8th Grade Support Segments</td>
<td>19</td>
<td>4.58</td>
<td>1.95</td>
<td>-1.584</td>
<td>1.565</td>
<td>6.00</td>
</tr>
</tbody>
</table>

*Note.* Support segments refer to the number of FTE segments in special education that students with EBD in the NGSD received.

**Assumption Testing**

According to Green and Salkind (2008), there are three assumptions that must be verified prior to conducting the Pearson correlation. The first indicates that the variables must be bivariately normally distributed. The second assumption states that if the normality assumption is met, a linear relationship is the only statistical relationship that can exist between two variables; a non-linear relationship may be found when this
assumption is violated. A scatterplot is used to visually assess linearity. The third assumption says that the sample is drawn randomly from the population and the scores for each variable are independent of one another (Green & Salkind, 2008).

In order to verify the assumption of normality, histograms were created for each variable. Figure 2, Figure 3, and Figure 4 display the distribution of sixth, seventh, and eighth grade reading CRCT scores while Figure 5, Figure 6, and Figure 7 display the distribution of sixth, seventh, and eighth grade math CRCT scores. No systematic deviations from the normal distribution were seen for the reading CRCT scores or for the math CRCT scores in each of the grade levels represented. The distributions can be assumed to originate from a univariate normally distributed population.
Figure 2. Histogram of 6th grade reading CRCT scores.

Figure 3. Histogram of 7th grade reading CRCT scores.
Figure 4. Histogram of 8th grade reading CRCT scores.
Figure 5. Histogram of 6th grade math CRCT scores.
Figure 6. Histogram of 7th grade math CRCT scores.
Figure 7. Histogram of 8th grade math CRCT scores.

The histogram of sixth, seventh, and eighth grade special education segments represented in Figure 8, Figure 9, and Figure 10, reveal a distinct non-normal shape. There are more individuals in the tails than expected with values of less than one segment per day and six segments a day. Transformations of the variable, such as square root and logarithm, proved unsuccessful in correcting the non-normality.

Interpreting the statistical methods skewness and kurtosis given in SPSS is another way of determining normality. Skewness measures the symmetry of the distribution and kurtosis defines the shape of the distribution (Tabachnick & Fidell, 2007). If the skewness and kurtosis fall within a range that is +/- twice the standard error
for skewness and kurtosis, then the distribution presents no problematic deviations from normality (Kendall, Stuart, Ord, & O’Hagan, 1999). In all grade levels, the level of special education support segments showed that kurtosis was elevated above the threshold of +/- twice the standard error. Therefore, the data could not be considered normal (Green & Salkind, 2008).

Therefore the assumption of bivariate normality of the two variables has not been met. The conclusions that may be drawn from this analysis may have limited scope in inference regarding the population of all sixth, seventh, and eighth grade students with EBD.

![Histogram of 6th Grade Special Ed Support Segments](image)

*Figure 8. Histogram of 6th grade special education support segments.*
Figure 9. Histogram of 7th grade special education support segments.
In order to determine linearity, scatterplots of the variables were analyzed. By examining Figure 11, Figure 12, and Figure 13, a weak, negative, linear relationship between CRCT reading scores and the number of special education support segments for grades six through eight is observed. Additionally, Figure 14, Figure 15, and Figure 16 each show a weak, negative, linear relationship between CRCT math scores and the number of special education support segments for grades six through eight. Thus, the assumption of linearity was met.

Figure 10. Histogram of 8\textsuperscript{th} grade special education support segments.
Figure 11. Scatterplot for 6th grade reading CRCT and support segments.
Figure 12. Scatterplot for 7th grade reading CRCT and support segments.
Figure 13. Scatterplot for 8th grade reading CRCT and support segments.
Figure 14. Scatterplot for 6th grade math CRCT and support segments.
Figure 15. Scatterplot for 7th grade math CRCT and support segments.
Figure 16. Scatterplot for 8th grade math CRCT and support segments.

The third assumption for the Pearson correlation coefficient dictates that the samples should be randomly drawn from the respective populations and that the variables are independent of one other. As described in the data collection section, the entire population was used, therefore, random sampling was not necessary. Since the measure used for the academic achievement variables was the Georgia CRCT and are assumed to be independent, because the CRCT is conducted under strict administrative procedures such as proctoring.
Results

Research Question 1

Research Question 1: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H₀₁): There will be no significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

The Pearson correlation coefficient (r) and associated p value were computed to determine if a relationship existed between sixth grade reading CRCT and the number of sixth grade special education segments. The value of r, -0.31, quantifies the weak, negative linear relationship shown in Figure 11. The p value, 0.026, is the likelihood of observing the given samples if the null hypothesis of no relationship between sixth grade reading CRCT and the number of sixth grade special education segments was true. This low p value gives evidence that there is in fact a relationship at the 5% significance level. However, since it was necessary to use the Bonferroni method with adjusted α of 0.0083, there is not enough evidence to declare the null hypothesis false. Therefore, the null hypothesis is retained. There is no significant relationship between sixth grade reading CRCT scale scores and the number of sixth grade special education segments.
Research Question 2

Research Question 2: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H₀): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

The Pearson correlation coefficient (r) and associated p value were computed to determine if a relationship existed between seventh grade reading CRCT and the number of seventh grade special education segments. The value of r, 0.16, quantifies the weak, positive linear relationship shown in Figure 12. The p value, 0.315, is the likelihood of observing the given samples if the null hypothesis of no relationship between seventh grade reading CRCT and the number of seventh grade special education segments was true. Since the p value is larger than the adjusted significance level, α of 0.0083, the null hypothesis is retained. There is no significant relationship between seventh grade reading CRCT and the number of seventh grade special education segments.

Research Question 3

Research Question 3: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?
Null Hypothesis (H₀³): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

The Pearson correlation coefficient \((r)\) and associated \(p\) value were computed to determine if a relationship existed between eighth grade reading CRCT and the number of eighth grade special education segments. The value of \(r\), 0.097, quantifies the weak, positive linear relationship shown in Figure 13. The \(p\) value, 0.702, is the likelihood of observing the given samples if the null hypothesis of no relationship between eighth grade reading CRCT and the number of eighth grade special education segments was true. Since the \(p\) value is larger than the adjusted significance level, \(\alpha\) of 0.0083, the null hypothesis is retained and there is no significant relationship between eighth grade reading CRCT and the number of eighth grade special education segments.

**Research Question 4**

Research Question 4: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H₀₄): There will be no significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.
The Pearson correlation coefficient (r) and associated p value were computed to determine if a relationship existed between sixth grade math CRCT and the number of sixth grade special education segments. The value of r, -0.23, quantifies the weak, negative linear relationship shown in Figure 14. The p value, 0.095, is the likelihood of observing the given samples if the null hypothesis of no relationship between sixth grade math CRCT and the number of sixth grade special education segments was true. Since the p value is greater than the adjusted alpha of 0.0083, the null hypothesis is retained and there is no significant relationship between sixth grade math CRCT and the number of sixth grade special education segments.

**Research Question 5**

Research Question 5: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009 and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis (H05): There will be no significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

The Pearson correlation coefficient (r) and associated p value were computed to determine if a relationship existed between seventh grade math CRCT and the number of seventh grade special education segments. The value of r, 0.11, quantifies the weak, positive linear relationship shown in Figure 15. The p value, 0.490, is the likelihood of observing the given samples if the null hypothesis of no relationship between seventh
grade math CRCT and the number of seventh grade special education segments was true. Since the $p$ value is larger than the adjusted alpha of 0.0083, the null hypothesis is retained. There is no significant relationship between seventh grade math CRCT and the number of seventh grade special education segments.

**Research Question 6**

Research Question 6: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Null Hypothesis ($H_{06}$): There will be no significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores.

The Pearson correlation coefficient ($r$) and associated $p$ value were computed to determine if a relationship existed between eighth grade math CRCT and the number of eighth grade special education segments. The value of $r$, -0.27, quantifies the weak, negative linear relationship shown in Figure 16. The $p$ value, 0.270, is the likelihood of observing the given samples if the null hypothesis of no relationship between eighth grade math CRCT and the number of eighth grade special education segments was true. Since the $p$ value is larger than the adjusted alpha of 0.0083, the null hypothesis is retained. There is no significant relationship between eighth grade math CRCT and the number of eighth grade special education segments.
Summary

This chapter presented the descriptive statistics, assumption testing, and hypothesis testing represented in this study. While one of the assumptions for the variables was not met, the data showed that no strong relationship existed between CRCT test performance and number of special education support segments received. Both weak positive and negative linear relationships were observed in the samples.
CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

The purpose of this study was to determine if there was a relationship between the level of special education support for students with EBD and their academic achievement in reading and math as measured by performance on the CRCT. For this study the level of special education support refers the amount of time as measured by FTE instructional segments.

After a brief introduction, this chapter is divided into the following sections: summary of the findings, discussion of the findings, implications, limitations, recommendations for future research, and conclusion. The purpose of this chapter is to review and discuss the findings of this research study.

As discussed in Chapter 2, Gaylord et al. (2005) indicated that there must be collaboration between all the instructional and administrative staff in the school to effectively educate students with EBD. Resources must be made available at the school and district levels to help sustain teachers with the educational practices that allow them to instruct students with difficult to manage behaviors. This will likely impact the decisions that are made in student IEP meetings regarding the setting and the level of special education support that students receive. If students receive the appropriate services, teachers should be effective in meeting the academic and behavioral needs of all students in the classroom setting (Kauffman et al., 2007; Lane et al., 2011; Stoutjesdijk et al., 2012).

The U.S. Department of Education (2005) indicates in the Twenty-Seventh Annual
Report to Congress on the Implementation of the Individuals with Disabilities Act when educators are able to predict the academic and behavioral failures of students with behavior problems, they then have much of the information necessary to prevent more serious academic and social problems from developing over time. It is important for educators to consider this when working with the EBD population. Research in this field is imperative to further the knowledge regarding placement decisions for students with EBD.

Much research has been done exploring the environment, placement, and setting for SWD; however, very few studies have explored the amount of time that students are served in relation to achievement especially when isolating the students with EBD population (Bradley et al., 2008; Harrington, 2011; Rea, McLaughlin, & Walther-Thomas, 2002). The research that has been done regarding level of special education support (amount of time) is extremely dated. Thurlow, Ysseldyke, Garden and Algozzine (1984) indicated in their research that time was a significant factor in the service of students with identified learning disabilities; however, their research focused specifically on the time that students were actively engaged in instruction and how it relates to academic achievement (Bradley et al., 2008; Harrington, 2011; Hollywood, Salisbury, Rainforth, & Palombaro, 1994). Through months of exploration, the researcher found minimal studies that specifically explored level of special education support (i.e., amount of time spent in special education) and academic achievement for students with EBD.

The research that has been done for students with EBD, such as the work of Tobin & Sugai (1999), indicated that when students with EBD are segregated from their non-disabled peers, they are at an increased risk of dropping out. Villa and Thousand (1995)
indicated that for middle school students with EBD specifically, there is little movement throughout the continuum of services after the initial placement. Once a child is placed on the continuum, he seldom moves to a less restrictive service. Research also shows that once placement decisions on the setting of services for students with EBD is in that of a more restrictive one, it is very difficult for them to transition back into one that is less restrictive (Mathes et al., 1998). In looking at the long term outcome for students with EBD who are provided a significant amount of service, the research is very important when considering the environment in which students with EBD are educated by exploring the levels of special education support that they are provided. This falls back to the decisions made by the IEP team regarding supports and services for these students.

As Bronfenbrenner (2005) suggests, it is extremely important to consider environmental needs of the students while recognizing the importance of the larger environment on child development. This environment also includes the amount of support that is provided to students with EBD. Educators recognize the profound effect that religion, ethnicity, and social class play in the development of a child. Educators should make the necessary changes in students’ environments to reflect these factors. Bronfenbrenner (2005) emphasizes the importance of the structured aspects of the environment that function to enhance or inhibit the processes of making human beings human. It is very difficult to teach students with behavioral problems when they are only exposed to other students who display those same behavioral problems. Thus, the environment has a significant impact on not only the development of a child but also in meeting the academic and behavioral needs of students with EBD. By exploring the
relationship between the level of special education support for students with EBD as it relates to their academic achievement, it was the hope of the researcher to find the optimal level of support in the environment that best meets their needs.

Summary of the Findings

Research Questions 1–3: Middle School Reading Achievement

Research Question 1: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Research Question 2: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Research Question 3: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and reading CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Analysis of the data collected in the current study provided the researcher with information regarding the degree of the relationship between level of special education support for middle school students with EBD and their academic achievement in reading and math as measured by performance on state-wide assessments, the CRCT.

The correlation between the level of special education support for students with EBD and their academic achievement in reading was explored in research questions 1–3.
By examining the histograms represented by Figure 11, Figure 12, and Figure 13 showing the level of special education support for students in grades six through eight, the researcher found a distinct non-normal shape. This may be explained by the fact that significantly more students were served in either less than one segment or in six segments. The mean scores ranged from 2.74 segments of support in sixth grade to 4.58 segments of support in eighth grade. This will be discussed in the next section of this chapter.

Participants’ scores on Georgia’s statewide assessment, the CRCT, were collected in the areas of reading and math to provide a measure of students’ academic performance. Aggregation of these scores displayed a relatively normal curve. In the area of sixth grade reading, the mean scale score fell within the acceptable range of proficiency (meets) at 816.91, although individual students’ scores ranged from the lowest at 779 (did not meet) to the highest 862 (exceeds) possible levels according to the cut score standards presented by the Georgia Department of Education.

In the area of seventh grade reading, the mean score fell within the acceptable range of proficiency (meets) at 809.21, while individual students’ scores ranged from the lowest at 774 (did not meet) to the highest 841 (meets) possible levels according to the cut score standards presented by the Georgia Department of Education. No students scored within the range that would be considered exceeding the state standards in the area of reading.

In the area of eighth grade reading, the mean score fell within the acceptable range of proficiency (meets) at 811.94, although individual students’ scores ranged from the lowest at 788 (did not meet) to the highest 860 (exceeds) possible levels according to
the cut score standards presented by the Georgia Department of Education.

Statistical analyses of the relationships between the level of special education support for students with EBD and their academic achievement in reading yielded low correlations in all grade levels. Pearson correlation coefficient, \( r \) values ranged from -0.306 in sixth grade to 0.181 in seventh grade and 0.097 in eighth grade demonstrating little relationship between the variables studied. None of the analyses studied were statistically significant. Therefore, there was not enough evidence to be able to reject the null hypothesis for any grade level indicating that no relationship could be determined.

**Research Questions 4–6: Middle School Math Achievement**

Research Question 4: Is there a significant relationship between the number of special education instructional support segments received for sixth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Research Question 5: Is there a significant relationship between the number of special education instructional support segments received for seventh grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009 and 2010 Criterion-Referenced Competency Test scores?

Research Question 6: Is there a significant relationship between the number of special education instructional support segments received for eighth grade students identified as Emotional Behavioral Disordered and math CRCT scores as measured by the 2008, 2009, and 2010 Criterion-Referenced Competency Test scores?

Analysis of the data collected in the current study provided the researcher with information regarding the degree of the relationship between level of special education
support for students with EBD and their academic achievement in reading and math as measured by performance on the CRCT. The correlation between the level of special education support for students with EBD and their academic achievement in math was explored in research questions 4–6. By examining the histograms represented by Figure 14, Figure 15, and Figure 16 showing the level of special education support for students in grades six through eight, the researcher found a distinct non-normal shape. This may be explained by the fact that significantly more students were served in either less than one segment or in six segments. The mean scores ranged from 2.74 segments of support in sixth grade to 4.58 segments of support in eighth grade. This will be discussed in the next section of this chapter.

Participants’ scores on statewide assessments, the CRCT, were also collected and the data analyzed to provide a measure of students’ academic performance. Aggregation of these scores displayed a relatively normal curve. In the area of sixth grade math, the mean score fell below the acceptable range of proficiency (did not meet) at 799.15. Individual students’ scores ranged from the lowest at 729 (did not meet) to the highest 906 (exceeds) possible level according to the cut score standards presented by the Georgia Department of Education.

In the area of seventh grade math, the mean score fell below the acceptable range of proficiency (did not meet) at 788.95, while individual students’ scores ranged from the lowest at 759 (did not meet) to the highest 833 (meets) possible level according to the cut score standards presented by the Georgia Department of Education. No students scored within the range that would be considered exceeding the state standards in the area of math.
In the area of eighth grade math, the mean score fell below the acceptable range of proficiency (did not meet) at 774.21, although individual students’ scores ranged from the lowest at 750 (did not meet) to the highest 831 (meets) possible levels according to the cut score standards presented by the Georgia Department of Education. No students scored within the range that would be considered for exceeding the state standards in the area of math.

Statistical analysis of the relationships between the level of special education support for students with EBD and their academic achievement in math yielded low correlations in all grade levels. Pearson correlation coefficient, \( r \) values ranged from -0.232 in sixth grade to 0.122 in seventh grade and -0.267 in eighth grade demonstrating little relationship between the variables studied. None of the analyses studied proved statistically significant. Therefore, the null hypothesis is retained for all grade levels indicating that a relationship could not be determined.

**Discussion of the findings**

The results of this research study demonstrate a weak correlation with no statistical significance between the level of special education support for students with EBD and their academic achievement in reading and math as measured by performance on statewide assessments. When considering these results, caution must be used given the lack of statistical significance. While other studies examining the impact of setting or environment on the academic achievement of SWD have shown favorable results (Bullock & Gable, 2006; Fore, Hagan-Burke, Burke, Boon, & Smith, 2008; Gale, 2005; Magiera & Zigmond, 2005; Mungai & Thornburg, 2002; Rea et al., 2002; Wischnowski, Salmon, & Eaton, 2004), these studies included students of all identified disabilities.
rather than looking specifically at those identified as EBD. A review of the literature identified a gap concerning the lack of correlational research examining whether a relationship existed between the amount of special education support that students with EBD received in relation to academic success. When looking at research exploring the amount of time or setting in which a student receives support and academic achievement, research has failed to show favorable results (Kloo & Zigmond, 2008; Marston, 1996; Weiss & Lloyd, 2002). Thus, the current research study is not the only study that failed to provide evidence of a strong statistical relationship between the student achievement and level of special education support. The fact that the current research study was unable to find evidence to reject the null hypothesis does not indicate that a significant association does not exist (Simon, 2006). The lack of significant findings only indicates this study did not discover any significant relationships. This does not detract from the relevance of the research and its implications or the importance to the field of education as a whole.

In the first variable addressed in the current study, level of special education support, there were obvious discrepancies in the level of special education support that students received. A significant number of the participants in the study received either less than one segment of support or a full six segments of support. This is supported in the research that has been done surrounding the environment and the level at which services are provided to students with EBD (Black, 2010; Bradley et al., 2008; Harrington, 2011).

Kauffman et al. (2007) and Kauffman and Laudrum (2009), indicated that students with EBD were both underidentified and underserved. Both studies indicated
that students with extreme or eternalizing behavior patterns such as aggression and
delinquency (Achenbach, 1991) were provided maximum support while students with
internalizing behavior patterns such as suicidal thoughts, depression, and anxiety
(Achenbach, 1991; Morris, Shah, & Morris, 2002) were left without the supports
necessary. This demonstrates that students with EBD are served at both ends of the
extremes: either underserved with less than one segment of service or overserved
resulting in a full six segments of support. Their research showed that the students who
were served in less than one segment are those who display more internalizing
components of behavior.

In his work on the ecological model of human development theory,
Bronfenbrenner (1979) discussed the impact of other individuals in a student’s
environment, specifically the restriction and reaction to others in the environment in
which children develop. His theory insists that students require an environment that
contains students who display appropriate academic and behavioral development in order
for further development of the child. Thus, students who are never exposed to such a
setting or environment will have difficulty developing in those areas. Research for
students identified with disabilities other than EBD shows little results for the effects of
placement on the academic and behavioral development of its participants (Fore et al.,
2008; Gale, 2005; Magiera and Zigmond, 2005; Rea et al., 2002; Wischnowski et al.,
2004).

In her longitudinal research of over 16 years, Hocutt (1996) found that for all
students with disabilities, there is no compelling evidence that placement rather than
instruction is the critical factor in student academic or social success. This does not,
however, isolate students with EBD. Further, studies have indicated that typical practice
in general education is substantially different from practice in the model programs that showed greatest success for students with disabilities. What happens for students with EBD is that the students’ behavior in these environments prevents them from experiencing success if support is not appropriate. The interventions that were effective in improving academic outcomes for SWD required a considerable investment of resources, including time and effort, as well as extensive support for teachers.

Bronfenbrenner (2005) insists that there is a relationship between problem behaviors and the environments in which students develop, including microsystems such as schools, peer groups, and work places. While specific settings where students were served were not explored in this study, the exploration of the level of special education support that students received was justified given Bronfenbrenner’s theory. Bronfenbrener’s idea that individuals are molded and shaped by their environments would indicate that if children are segregated from typically developing peers for a significant portion of the school day, they would have greater difficulty generalizing appropriate academic and behavioral success. This is supported by research that indicates if students with EBD are not included with typically developing peers by high school that they are more likely to drop out when compared to their disabled peers (Tobin & Sugai, 1999).

As discussed in Chapter 2, decisions regarding setting and level of special education support are left up to the discretion of the IEP team. Teams need to be able to make decisions about these factors based upon research and individual student data. The law requires IEP teams to consider a continuum of services when determining educational benefit with the services occurring in the LRE, as FAPE requires, supports
and services for the child can be as unique as each child (Sacks, 2009; Valle & Connor, 2011). Modifying the actual environment in which the student is being served is not often considered, but rather, the setting where the student is served is changed. These decisions are being made as a process-driven system where special education is the response to deficits within the child, not within the environment (Hehir et al., 1991; Nilholm, 2006). Research has shown that there are many factors that can and do influence these decisions that may or may not be the most beneficial for the student (Cook, 2004). Factors such as resources, administrative support, teacher training, teacher attitudes, and tolerance can impact and often end in more supports provided for the child than may be necessary, with little benefit in the areas of academics and behavioral change (Cook, 2004; Idol, 2006).

The second variable addressed in the current study, academic achievement, provided the research with the most valuable information. While there was no statistically significant relationship between the reading and math CRCT scores and the level of support that students with EBD received, CRCT scores were normally distributed indicating that there were varying levels of academic achievement and proficiency. Students that participated in the research study performed in the highly proficient range while others in the study failed to meet the minimum requirements. The mean scale scores for the participants were lower than would be expected for students identified as EBD, regardless of level of special education support. By definition, students with EBD have an average intelligence; this raises concern that perhaps students are achieving below their potential as learners in addition to achieving below standards as a whole group. Furthermore, given the research design that was selected for this study and the
limitations that were presented, the researcher was not able to identify causation and is left with questions unanswered regarding the relationship between the two variables.

**Limitations**

In the current research study, the researcher attempted to conduct a study with as few limitations as possible. However, despite the efforts to conduct careful research, limitations occurred. Initially, the research design presented some limitations in and of itself. Given the selection of the area of study, the researcher was limited to a small number of participants that were available for selection. While random sampling did not occur, the two variables were not related. The researcher attempted to minimize the resulting threats to internal and external validity by selecting the entire population of students identified as EBD in NGSD to participate in the study. Generalization of the study is limited to those with similar demographics, structure, and design (Myers, 2000).

Other factors that should be considered when interpreting results of a correlation are the demographics of the population and other factors that can impact not only student achievement but also decisions regarding level of special education support for students with EBD. Factors may include, but are not limited to, socio-economic status, gender, race, teacher attitudes and training, classroom instructional strategies, and student motivation.

While the use of the CRCT to measure academic achievement reduces the threat of internal validity, there are some concerns as to the consistency of the instructional strategies used to teach students represented in this study. While teachers are directed to teach the Georgia Performance Standards, there is no guarantee that students with EBD were exposed to grade level standards.
Teachers reporting of the levels of support that students received may have posed a threat to the internal validity of the study. This reporting was done, however, outside the realm of the study. FTE is heavily dependent upon the reports of accurate information regarding the amount of special education support that the student receives. This information is validated through student management and reporting systems, and is dependent upon human reporting. While the threat is minimal, it does exist.

The study was heavily reliant on the decisions that were made for students at their IEP meetings indicating that the level of special education support that was designed for them was appropriate in meeting both their academic and behavioral needs. As discussed throughout the study, these decisions may have been influenced by other factors indicating a limitation in the design of the research study. Additional limitations may include the ability level of the students that participated in the study. While by definition students identified with EBD have an IQ that would be considered at minimal in the average range, there are students who may not have been properly identified. They may have additional disabilities that could impact their academic achievement. While many factors have the potential to impact and limit the results of this study, much information can still be gained based on the findings and discussion of the research.

**Implications**

While the results of this study yield no relationship between the level of special education support and the academic achievement in reading and math for students identified as EBD, it is consistent with the research of others studying students with other disabilities (Kloo & Zigmond, 2008; Weiss & Lloyd, 2002; Marston, 1996). In each of these studies, academic achievement decreased with supports provided. There is a
potential benefit, however, of the research that explores the academic achievement of students with EBD as it relates to the level of special education support they receive. The current research has brought to light the underachievement of students with EBD regardless of the level of special education support that they received.

While causation cannot be determined, it is the responsibility of the IEP team to place students in a setting with the level of special education support that best meets their behavioral and academic needs. With this optimal level of support, students should achieve. If not, then further study is needed to determine causation. This was not the case in this study. As was seen with the level of special education support that participants received in this study, there was no relationship between the two. Student achievement did not increase nor decrease based upon the amount of support that students with EBD received.

The research of Stoutjesdijk et al. (2012) indicated that many times decisions about the level of special education support needed for a student with EBD are based upon the interaction that the student has with the educator or care-giver rather than what the student may need to support them behaviorally and academically. While this research was not able to show a relationship between the level of special education support and academic achievement, the findings were consistent with the research of Stoutjesdijk et al. (2012) in which participants were segregated at a higher rate and their achievement as a whole was lower than peers with other disabilities. From this research it is evident that there are many factors that have the potential for impacting student achievement, as discussed in Chapter 2, other than the location of where the service is provided. By
looking at the amount of service that the student received in this study, the researcher was unable to determine that this was a factor that impacted achievement as well.

There are many factors that can affect the academic achievement of students with EBD as the decisions that are made by the IEP team in regards to the level of special education support that the student will receive. This was, of course, not a focus of this research but could have significant impact of the implications of the study. The studies that explored the variables that may impact academic achievement suggest that demographic variables such as low socioeconomic status, ethnicity, age, gender, and IQ may contribute to the prediction of educational placement at a more restrictive level or with a higher level of educational support (Cohen et al., 1990; Kauffman et al., 1987; La Paro, Olsen, & Pianta, 2002; Westendorp, Brink, Roberson, & Ortiz, 1986) resulting in decreased achievement.

In their research on students with EBD that struggle with reading, McDaniel, Duchaine and Jolivette (2010) found that instruction was inadequate in the following areas: (a) appropriate academic interventions and placement of students, (b) instructional scheduling and organization, and (c) appropriate reading probes on their grade level. The researchers found that by improving the areas found lacking, students were able to achieve at a higher level and teachers had improved attitudes in regards to teaching students with EBD.

As discussed previously, there is greater accountability for all students including those with EBD. This research study did not collect empirical data that explored the setting in which special education services took place nor the type of academic instruction that was provided to the participants. This research can, however, leave us
with the understanding that while level of special education support of students with EBD and their academic achievement in reading and math is relevant to the accountability and success of the field of education as a whole. The individual needs of the child must be addressed in each and every decision that is made for the child; all relevant data must be considered. Zigmond (2006) indicated that it is not necessarily the setting in isolation that makes for effective special education services, but rather the teaching strategies and an individualized approach to meet the needs of the students.

**Recommendations**

**Recommendations for Practical Application**

While the results of this study were not able to determine the relationship between the two variables of student achievement in the areas of reading and math and the levels of special education support, several recommendations for practical application can be determined. While not explored specifically in this study several themes did arise throughout the literature. Districts may want to consider the issues that were discussed as limitations to the success of students with EBD. They included (a) lack of teacher training in meeting the needs of students with EBD (Bradley et al., 2008), (b) lack of knowledge in specific instructional strategies that are beneficial for students with EBD (Zigmond, 2006), (c) successful strategies for including students with EBD in the general education setting (Stoutjesdijk et al., 2012), (d) placing students with teachers who have a desire to teach students with EBD (Cook, 2004; Gage et al., 2010), and (e) training for administrators and teachers on the decision making process for the IEP meeting (Stoutjesdijk et al., 2012).
For this study specifically, the law requires IEP teams to consider a continuum of services when determining educational benefit with the services occurring in the LRE (Sacks, 2009; Valle & Connor, 2011), however, from the research findings and support throughout literature, it was apparent that the services for students with EBD occur in settings with minimal support or in the most restrictive settings. It would be beneficial for NGSD and other schools districts in Georgia to train administrators and teachers on an effective decision making process with regards to determining the most appropriate services not only for students with EBD but for all students with disabilities. This would allow the IEP team to make data-driven decisions when determining the most appropriate services to meet the needs of all students with disabilities.

**Recommendations for Further Research**

While the limitations of all research studies can impact the results, further and ongoing research is necessary and beneficial in meeting the needs of students with disabilities, especially those that are identified as EBD. This research study yielded the following recommendations. While participant size was a limitation of this study, it would be worthwhile to further develop this research by expanding the participant numbers above those within the NGSD to include other school districts and perhaps the state of Georgia. The study would need to involve a larger randomized sample with consistent behavioral and academic strategies in place. In doing so, researchers would have a greater ability to make generalizations.

With regards to the academic achievement of the given population, since the scale score means was below proficiency level in the area math for all three grade levels in this research study, it may be worth further study to determine if there is a setting or certain
instructional strategies that would aid students with EBD in meeting and exceeding state standards in the area of math.

Stoutjesdijk et al. (2012) indicated that future research should not focus on students with EBD who receive education in the most segregated settings but should aim at including groups of children with EBD with varying levels of special education support throughout the special education continuum, especially those settings that are close to the fully integrated part. It would be important to study what is occurring in the settings where students are receiving a decreased level of support as it relates to their academic achievement. If future studies show that there is no correlation, at least the variable of level of special education support can be excluded from future studies.

Finally, it would be beneficial for additional research on specific academic strategies that allow students with EBD to be academically and behaviorally successful with less special education support. Wagner et al. (2005) indicate that this would provide a more solid basis for decisions regarding adequate support of students with EBD in various settings. This would allow educators the ability to gain greater insight into the aspects of special educational support having potential for stimulating positive development of students with EBD (Bronfenbrenner, 2005).

Conclusion

The results of this study indicated that there is little relationship between the level of special education instructional support segments (ie, amount of time in special education) and the academic achievement of students with emotional behavior disorders. By examining the CRCT scores in reading and math as they relate to the level of special education support that students with EBD received, the researcher was not able to
determine a direct correlation. However, findings did show in the area of math that student mean scale scores were below the acceptable range of proficiency in all three-grade levels. Since the participants encompassed the whole population of middle school students with EBD and inferential statistics were used, results could be generalized to middle school students with EBD in the state of Georgia.
REFERENCES


and some suggestions for controversial research. *Behavioral Disorders*, 29(3), 300–310.


http://ici.umn.edu/products/impact/182/default.html


Georgia Department of Education. (2009). *Assessment and accountability brief: Validity and reliability for the 2009 Criterion-referenced Competency Test.* Atlanta, GA:


program evaluation of eight school. *Remedial and Special Education*, 27(2), 77-94.


Lane, F. M. Gresham, & T. E. O’Shaughnessy (Eds.), *Interventions for children with or at risk for emotional and behavioral disorders* (pp. 223–241). Boston: Allyn and Bacon.


children and youth we serve: A national picture of the characteristics of students with emotional disturbances receiving special education. *Journal of Emotional and Behavioral Disorders, 13*, 79–96.


APPENDIX A: SUPERINTENDENT PERMISSION

August 23, 2011

To Whom It May Concern:

I, [Name], Superintendent of [School District], grant MaryKay Berry permission to conduct a study to examine if the amount of service a student with EBD receives impacts their academic achievement and/or rate of discipline referrals. She will have access to CRCT testing data and discipline referral numbers for the 2008, 2009 and 2010 school years, for students with EBD in [School District]. It is my understanding that the information to be gathered will not compromise the confidentiality or identity of the students, the schools or the system in any way.

Sincerely,

[Signature]

Superintendent
APPENDIX B: SPECIAL EDUCATION DIRECTOR PERMISSION

August 23, 2011

To Whom It May Concern:

It is with great pleasure that I, Donna Dixon, Director of Special Education for Grant Permission to allow MaryKay Berry to conduct a study to examine if the amount of service a student with EBD receives impacts their academic achievement and/or rate of discipline referrals. She will have access to CRCT testing data and discipline referral numbers for the 2008, 2009 and 2010 school years, for students with EBD in I understand that the information gathered would be for research purposes only and that the identity of the students, the schools and the system will not be revealed.

You have my support to examine the data needed in your research study. I trust your use of the information will be conducted in a professional and confidential manner. As a completion of your study, I would be most interested in the results in order to utilize your research to better enhance the learning of all students in County Schools. Please keep me posted of your success and progress.

If I can be of more service to you do not hesitate to contact my office.

Best regards,
APPENDIX C: IRB APPROVAL

From: IRB, IRB [IRB@liberty.edu]
Sent: Monday, July 23, 2012 9:04 AM
To: Berry, MaryKay B
Cc: IRB, IRB; Garzon, Fernando; Ackerman, Margaret Elizabeth
Subject: IRB Annual Review Approval: The Relationship Between the Level of Special Education Instructional Support Segments and the Academic Achievement of Students with Emotional Behavior Disorders

Good Morning MaryKay,

Thank you for submitting your annual review form to us. In reviewing your form and identifying that there are no changes to your protocol, the Liberty IRB grants approval for your data collection to continue for an additional year. As with your original approval, if your data collection proceeds past June 18, 2013, you will need to submit another annual review form. Additionally, if there are any changes to your approved protocol, you will need to submit a change in protocol form to us prior to implementing any changes unless the changes are for the protection of your participants.

Please do not hesitate to email us with any questions.

Thank you,

G. Michele Baker
Institutional Review Board Coordinator
The Graduate School

(434) 522-0506

Liberty University | Training Champions for Christ since 1971

125