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**The Relationship Between Academic Achievement of Students
Withemotional/Behavioral Disorders and Their Educational
Placement Setting**

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THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT OF STUDENTS
WITH EMOTIONAL/BEHAVIORAL DISORDERS AND THEIR EDUCATIONAL
PLACEMENT SETTING

BY

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Abstract

This study examined the relationship between the academic performance of students with emotional/behavioral disorders and type of educational setting. Archival data was collected from a school district in the southeastern region of the United States on 231 students with a primary designation of Emotional Behavioral Disorder (EBD). The students ranged in age from 7 to 18 (mean 14.3, SD 2.21) and were placed in self-contained, resource, and general education classrooms. It was hypothesized that students with EBD who were educated in self-contained classrooms would have better academic performance than those who are placed in general education. The study took into account confounding variables such as the number of absences, amount of time spent in Exceptional Student Education classes, length of time under EBD designation, and gender. A one-way ANOVA was used to compare the academic achievement scores between the groups and a significant difference was found in the FCAT scores between the general education group and the self-contained group with the general education group scoring higher in reading and math. Limitations and suggestions for future research are discussed.

**The Relationship Between Academic Achievement of Students with
Emotional/Behavioral Disorders and Their Educational Placement Setting**

The passing of Public Law 94-142, required the public school system to provide educational opportunities for students with disabilities (The Education of All Handicapped Children Act, 1975). The law stated that students with disabilities should be educated in the least restrictive environment (LRE), however for many students LRE was part-time or full-time placement in classes that only consisted of students with disabilities. With the onset of new educational initiatives of full inclusion, most students with disabilities are now in the general education classrooms to the maximum extent possible, with the exception of students with emotional/behavioral disorders (EBD). For example, only about 27% of students with EBD are placed in the general education setting, whereas 50% of students with other disabilities are placed in general education (Wagner & Cameto, 2004). In addition, research has shown that students with EBD tend to be educated in the most restrictive environment (i.e., self-contained classrooms), earn lower grades, and are retained more often than students of other disabilities (Wagner & Cameto, 2004). Furthermore, there has been an ongoing debate regarding the most effective and nonintrusive educational setting that will help this population of students succeed academically. Some educators argue that the general education setting is where EBD students would benefit the most, whereas others believe that a more restrictive setting may provide better academic support (Kauffman, Bantz, & McCullough, 2002; Juane & Lyndal, 1999; Landrum, Tankersley, & Kauffman, 2003). Regardless of the differing viewpoints, placement decisions for EBD remains controversial and the question still remains unanswered as to which educational placement will help students

with EBD perform better academically.

Definition of EBD and Historical Background

Emotional/ Behavior Disorder (EBD) is defined as a condition exhibiting one or more of the following characteristics over a long period of time and to an extent that adversely affects a student's academic performance: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; (e) a tendency to develop physical symptoms or fears associated with personal or school problems (Individuals with Disabilities Education Act of 2004, 34 C.F.R. § 300.8, 2004). Emotional and Behavioral Disorder is a condition in which a child's emotional and/or behavioral responses are so different from his or her typical age, ethnic, or cultural norms, that it interferes with their school performance, social relationships, and/or work adjustment (Gaylord, Quinn, McComas, & Lehr, 2005). The intensity of the students' behavior is more than a typical response to stressors in the environment, and does not lessen even when interventions and modifications have been made to the environment.

In 1975, the U.S. Congress passed the Education for All Handicapped Children Act (Public Law 94-142), that mandated a free and appropriate public education for all students with disabilities. Under Public Law 94-142, students with emotional disabilities were classified under the educational category of severely emotionally disturbed (SED). In 1990, Public Law 94-142 was renamed as the Individuals with Disabilities Education Act (IDEA) which classified students with emotional disabilities under the educational

category of emotional disturbance (ED). To date, the term EBD is the widely accepted term to define this population. Thus, EBD will be the term used throughout this review of literature.

There are two broad categories of symptoms or behaviors that were used in the past to identify students with EBD: internalizing symptoms (e.g., withdrawal, depression, shyness, and phobia) and externalizing symptoms (e.g., aggressive, noncompliant, defiant, resistive, and disruptive). There are other different classification systems to categorize individuals with EBD. One classification system that is most widely used by clinicians focuses on the behavioral and emotional aspects that are outlined in the DSM-IV-TR such as persistent and excessive anxiety and worry. The following are examples of emotional/behavioral conditions in the DSM-IV-TR that clinicians use to classify individuals with EBD: ADHD, obsessive compulsive disorders, tic disorders, anxiety disorders, mood disorders, conduct disorder, and psychotic disorders (American Psychiatric Association, 2000). Autism was once classified under emotional disturbance because children with Autism often exhibited behaviors that were thought to be due to emotional difficulties. However professionals no longer classify autism under this category because it is no longer considered to be a disorder that is caused by emotional problems (Smith, Polloway, Patton, & Dowdy, 2006).

Data suggests that there are many students who could qualify as EBD but have not yet been identified and are not receiving special services to help them (U.S. Department of Education, 2002). Despite the lack of students being identified as EBD, Black students are overidentified as EBD and are 1.92 times more likely to be identified as EBD than White students (Gaylord et al., 2005).

Academic Outcomes of Students with EBD

There is little research regarding the current status of the academic achievement of students with EBD (de Lugt, 2007). Consequently, there is also a lack of research regarding the academic needs for this population of students (Wehby, Lane, & Falk, 2003). Students with EBD are consistently found to have one of the highest dropout rates among students with disabilities. The strongest predictor of students with EBD dropping out of school may be grade retention, followed by boredom and the number of absences (Wagner & Cameto, 2004). Approximately 38% of students with EBD have been retained at least once in their academic career (Wagner & Cameto, 2004). In contrast, when students with EBD have less tardiness and better homework completion rates the likelihood of them dropping out of school decreases (Reschly & Christenson, 2006).

Students with EBD are much more likely to receive initial special education services later in their academic careers than other disability categories. More than half of secondary students with EBD did not begin to receive special services until they reached the age of 9 or older (Wagner & Cameto, 2004). In addition, students with EBD experience the highest rates of school mobility when compared to other disabilities, which often disrupts their academic performance.

On average, students with EBD experience greater academic difficulties when compared to regular education peers. They experience academic deficits across all content areas. Their written and reading abilities are found to remain the same overtime whereas difficulties in the area of mathematics may increase over time (Nelson, Benner, Lane, & Smith, 2004). One reason that may explain the finding that math difficulties increase over time in students with EBD is that they are not exposed to higher level math

courses in secondary school. It is noted that EBD does not cause poor academic achievement, but there may be a strong correlation between school variables (e.g., absences) and the characteristics of EBD (e.g., behavioral problems, poor attention) (Nelson et al., 2004).

Factors related to poor academic outcomes.

It is noted by de Lugt (2007) that there is very little information regarding the factors and instructional practices that affect the academic performance of students with EBD. One factor that may be related to poor academic outcomes of students with EBD is the climate of the academic environment. For example, teachers of EBD students often make less instructional demands, more behavioral reprimands, and less verbal positive phrases than teachers of regular education students (Wehby, Shores, & Symons, 1995). Poor climate in the academic environment is related to the interactions between the students and the teachers. For example, general education teachers may sometimes feel that their classroom may not be the most appropriate setting for students with EBD. Therefore regular education teachers may have the tendency to become resistant to making changes to their classroom environment for students with EBD (e.g., books/materials and teaching strategies) (Wehby et al., 1995).

It appears that the internalizing and externalizing behaviors of EBD students are not directly related to poor academic achievement. Rather, they may be related to attention difficulties which in turn may affect their academic achievement (Barriga, Doran, Newell, Morrison, Barbetti, & Robbins, 2002). When students respond to academic instruction with outbursts or aggressive behaviors, this in turn, may lead to a decrease of instructional time as the teacher deals with problematic behavior.

Another factor that is related to the poor academic outcomes of students with EBD is the quality of instruction. Teachers may not be equipped with the necessary skills and training to deal with the day to day issues presented by students with EBD. It is noted that the lack of training and support for teachers of students with EBD may be related to poor academic outcomes for students with EBD (Bradley, Doolittle, & Bartolotta, 2008). Teachers are not provided with the necessary classroom management skills to deal with the variety of challenges that they encounter while instructing students with EBD. The researchers noted that there were a greater number of teachers of students with EBD who have provisional certificates than teachers of students in other areas. Students with EBD were also more likely to receive a large portion of their services from paraprofessionals which can also affect their rate of academic achievement.

Factors related to positive academic outcomes.

Research suggests that teachers who possess competent instructional skills may produce better academic outcomes for students with EBD (Sutherland, Lewis-Palmer, Stichter, & Morgan, 2008; Gunter, Coutinho, & Cade, 2002). More specifically, there is a strong relationship between teacher praise, student opportunities to respond (OTR) to academic requests, and the academic achievement of students with EBD (Sutherland & Wehby, 2001). Students with EBD are more academically engaged and on task when teachers display higher rates of verbal praise and provide OTR. To further investigate this relationship, Sutherland, Wehby, and Yoder (2002) found that students are likely to respond to academic requests within 5 seconds of a verbal praise from their teacher.

Educational Placement of Students with EBD

Efforts have been made to ensure that EBD students' academic and behavioral needs are met through a variety of educational settings. The Individuals with Disabilities Education Act of 2004 (IDEA) necessitates that all students' education is to take place in the least restrictive environment. Under this law, students with disabilities should not be removed from the general education setting. Any other setting (i.e., self-contained classroom) would only be appropriate when the student cannot achieve in the general education setting, even when special aid and support services are provided for the student. As a result of IDEA least restrictive environment clause, students with disabilities are included into the general education setting to the maximum extent possible.

The amount of time spent in the general education depends on the student's needs. Once the needs are determined, an Individualized Education Plan (IEP) is developed. Some students benefit from full-time inclusion in a regular classroom setting, whereas other students benefit from partial or minimal placement in general education. Students, who have been identified with severe disabilities such as EBD, will typically spend less time in the general education setting than students with other disabilities. When Hendrickson, Smith, and Carl (1998) examined the decision making factors that that were related to the types of placement of students with EBD, they found that students with EBD who were in self-contained schools were rated as more aggressive and disruptive and needed more intense interventions.

Advocates could argue that a separate environment is somewhat better than inclusion for students with EBD (Landrum et al., 2003). A self-contained classroom is

based on the fact that the student needs more intense intervention(s) which the regular education teacher is unable to provide. Although some individuals may believe that a self-contained classroom for students with disabilities may be unjustified, research indicates that separate settings (i.e., self-contained) may better provide for the needs for students with EBD than the regular education setting. For example, Kauffman et al. (2002) examined a self-contained classroom of students with EBD who were in 5th and 6th grade and concluded that a self-contained setting was more appropriate because the teacher-student ratio was much smaller (1:3). In addition, the self-contained classroom provided more opportunities to control inappropriate behaviors and interventions could be carried out and monitored with fidelity.

Statistically, much of what is known about students with EBD comes from the National Longitudinal Transition Study-2 (NLTS-2). The NLTS-2 (Wagner & Cameto, 2004) found that there has been an increase in the number of students with EBD taking general education classes since the 1980's. More students with EBD are taking science, social studies, and foreign language classes in the general education setting. However, they are still being placed in general education classes to a lesser degree than students with other disabilities. Approximately 88% of students with other disabilities take at least one class in general education when compared with 75% of students with EBD. On average, secondary students with EBD take half of their classes in the general education setting whereas students with other disabilities take 60% of their classes in general education classrooms. In addition, approximately 16% of secondary students with EBD take all of their courses in more restrictive settings when compared to 9% of students with other disabilities.

Perceptions of Inclusion vs. Self-Contained Classrooms

Students with EBD are the most likely to experience different educational placement settings than any other disability group. The research evidence still remains unclear as to which educational placement option is best for students with EBD. Determining the extent to which students with EBD are placed in the least restrictive environment may not solely depend on the student's behavioral needs. When examining the attitudes of elementary and secondary teachers towards the concept of full inclusion for students with EBD, Juane and Lyndal (1999) found that all of the teachers in their sample felt that inclusion would not meet the special needs of all students and the lack of specialized instruction may impede the academic performance of students with EBD. Approximately half of the teachers felt that full inclusion should be decided on an individual basis. They felt that full inclusion of students with EBD would cause the student to miss needed specialized instruction and would cause teachers to neglect the needs of their regular education students. None of the teachers who were interviewed mentioned inclusion for academic gain purposes. Rather, they felt that inclusion was better for students with EBD to improve their behavior and social skills.

A similar study conducted by Ireland (2002), examined the attitudes of regular education and special education teachers about school placement for students with EBD. Regular education teachers felt that inclusion had lesser positive effects on students than did the special education teachers. In addition, regular education teachers and specialists felt that the regular education setting had more negative effects on students with EBD than special education teachers. They also felt that inclusion would increase the workload for teachers. The last important finding was that of teaching experience and attitudes

towards inclusion. Teachers with more experience had less positive attitudes towards inclusion and felt more strongly about the negative impact of inclusion than did teachers with less experience.

In their study, Beaudoin, Knuth, and Benner (2008), reported on the perceptions of 302 school administrators in Washington State on the quality of educational services that were provided to students with EBD in their building. The researchers compared the perceptions of administrators in schools with self-contained classrooms for students with EBD and administrators who were in buildings without self-contained programs. Special education teachers in self-contained classrooms were rated higher by the administrators in their abilities to determine the behavioral needs of students with EBD and in monitoring the progress of their behavior than teachers who taught in less restrictive settings. However, both groups of administrators rated the academic progress of students with EBD as below satisfactory.

Academic Achievement and Educational Placement

Concerns about the academic outcomes of students with EBD have led to an examination of the academic performance as it relates to the different educational settings in which they are placed. Although research has shown that students with EBD experience difficulties in all content areas (Nelson et al., 2004; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004), there is a limited amount of research on their academic performance in different educational settings (e.g., self-contained, inclusion, general education).

To date, no particular educational setting has proven to be more effective over another for students with EBD. A study conducted by Anderson, Kutash, and

Duchnowski (2001) found that there was no significant difference between the academic performance and type of educational placement in their sample of 42 students with EBD. A meta-analysis that synthesized 26 research articles between the years 1975-2001 on the academic status of students with EBD across regular, resource-room, self-contained, and special school settings, indicated that there were no significant differences in their academic performance (Reid et al., 2004). Although the researchers found that the students performed below grade level across all settings, the results were interpreted with caution as less than half of the studies did not report demographic data. In addition, the method of identification of students with EBD varied. For example, in some studies the students were identified using an educational classification system whereas in others they were identified using diagnostic criteria of the DSM.

With regard to self-contained settings, Lane, Wehby, Little, and Cooley (2005) examined the academic progress of students with EBD who were receiving services either in a self-contained classroom or self-contained school. The results indicated that students with EBD who were educated in self-contained classrooms had better academic performance than students educated in the self-contained school. A similar study reviewed the records of 42 students with EBD who were placed in a self-contained school and found that they performed below average academically (Lane, Barton-Arwood, Nelson, & Wehby, 2008). Elementary as well as, secondary students with EBD performed below grade level in the areas of reading, written expression, and math. A limitation to Lane et al.'s (2008) study was that the sample was heterogeneous. That is, not all students had a label of EBD as their primary designation.

Rationale for the Proposed Study

Some regular and special education teachers believe that students with EBD belong in more restrictive settings whereas other educators believe they should be educated in the least restrictive environment (Kauffman et al., 2002; Juane & Lyndal, 1999). Although many educators have begun to recognize that the academic performance of students with EBD may vary based on their educational placement setting, it remains unclear as to which educational setting may be most beneficial for academic success. Furthermore, it may be difficult for educational personnel to develop academic interventions and accommodations for students with EBD if it is unclear about the best educational setting for students with EBD.

Several studies have examined the academic performance of students with EBD (Nelson et al., 2004; de Lugt, 2007; Reid et al., 2004; Lane et al., 2008). However, few studies have examined the relationship between the academic outcomes of students with EBD and the type of educational setting in which they are placed (e.g., self-contained, general education). In their study on examining the academic performance of students with EBD who were receiving services in a self-contained school, Lane et al. (2008) found that elementary and secondary students were performing below average in the areas of reading, writing, and math. The present study will examine the academic performance of students with the primary diagnosis of EBD who were receiving services in a self-contained classroom setting versus students with EBD who were receiving services in the general education setting.

In addition to educational placement, other factors that are thought to be related to the academic performance of students with EBD are the severity of behaviors (e.g.,

school adjustment, externalizing, and internalizing) and various instructional techniques. For example, research shows that students with EBD may act out aggressively due to their academic frustrations (Barriga et al., 2002). It is noted in research that students with EBD have poor attendance rates and are at a higher risk for school dropout (Anderson et al., 2001; Wagner & Cameto, 2004). However, research has not examined the difference in attendance rates of students with EBD who are placed in general education and self-contained classrooms. The present study will examine the attendance rates of students with EBD who are placed in either of the aforementioned settings as it relates to their academic performance. The last factor that will be studied in the present research is the amount of time that students have been under the designation of EBD and their academic performance. In a meta-analysis, Trout, Nordness, Pierce, and Epstein (2003) noted that no studies have reported the age of students when they were initially identified as having EBD. Thus, students who have been identified longer may have different patterns of academic functioning because they have been receiving more intensive instruction as a result of the early identification.

Hypothesis 1. Students with EBD who are educated in a self-contained setting will have better academic performance when compared to those students with EBD who are educated in the general education setting. Additionally, it will be expected that students in self-contained classes will have less absences than students who are placed in general education. The null hypothesis is that students with EBD who are educated in a self-contained setting will have the same academic performance when compared to those students with EBD who are educated in the general education setting.

Hypothesis 2. It is expected that there will be a positive correlation between the length of time the student has been designated as EBD and their academic performance, with those having the designation longer (number of years) having a more positive academic outcome. The null hypothesis is that there will not be a positive correlation between the length of time the student has been designated as EBD and their academic performance.

Hypothesis 3. There will be a gender effect for the EBD designation, with girls showing a more positive academic outcome than similarly matched boys. The null hypothesis is that there will not be a gender effect for the EBD designation. The academic outcome will be equal regardless of gender.

Method

Participants

The participants consisted of 231 (200 boys and 31 girls) students between the ages of 7 and 18 (mean of 14.3 with a SD of 2.21) who had a primary designation of EBD. Student grade placement ranged from 4th to 12th with a mean grade level of 7.95 and a SD of 2.20. Please see Table 1 for means and standard deviations of grade, age, EBD groups, FCAT level, EBD designation time, and number of absences. Please see Table 2 for the number and percentage of participants in the following categories: gender, race, EBD group, and FCAT level. Students with EBD who were being homeschooled, or receiving a special diploma, and/or over the age of 18 were eliminated from the study because they either did not take the FCAT or were placed in specialized programs. All participants in the study were identified as EBD by a multidisciplinary team using the Florida Department of Education's definition based on IDEA criteria.

EBD was defined as

“an inability to maintain adequate performance in the educational environment that cannot be explained by physical, sensory, socio-cultural, developmental, medical, or health (with the exception of mental health) factors and must demonstrate one or more of the five characteristics listed below:

(a) Internal factors characterized by:

- Feelings of sadness or frequent crying or restlessness or loss of interest in friends and/or schoolwork, or mood swings, or erratic behavior
- The presence of symptoms, such as fears, phobias, or excessive worrying and anxiety, regarding personal or school problems
- Behaviors that result from thoughts and feelings that are inconsistent with actual events or circumstances, or difficulty maintaining normal thought processes, or excessive levels of withdrawal from persons or events

(b) External factors characterized by:

- An inability to build or maintain satisfactory interpersonal relationships with peers, teachers, and other adults in the school setting
- Behaviors that are chronic and disruptive, such as noncompliance, verbal and/or physical aggression, and/or poorly developed social skills, and are manifestations of feelings, symptoms, or behaviors as specified above, in section (a)” (Florida Department of Education Division of K-12 Public Schools Bureau of Exceptional Education and Student Services, 2009, p. 65).

Table 1

Means and Standard Deviations of Participants (N = 231)

Characteristic	<u>M</u>	<u>SD</u>
Grade	7.95	2.20
Age	14.13	2.21
EBD Groups	2.19	.82
FCAT Math Level ^a	2.05	1.08
EBD Designation Time	5.24	2.70
Number of Absences	12.19	11.44

Note. ^aFCAT Level 1 and 2 are considered below grade level performance.

Table 2

Demographic Characteristics of Participants (N = 231)

Characteristic	n	%
Gender		
Male	200	87
Female	31	13
Race		
Black	94	41
White	94	41
Hispanic	41	17
Asian	2	1
EBD Groups		
0 minutes	60	26
More than 0 less than 1,000 minutes	66	29
1,000 or more minutes	105	45
FCAT Reading Level ^a		
Level 1	117	51
Level 2	48	21

Continued

Continued

Level 3	49	21
Level 4	12	5
Level 5	5	2
FCAT Math Level ^a		
Level 1	96	42
Level 2	55	24
Level 3	59	25
Level 4	15	6
Level 5	6	3

Note. ^aFCAT level 1 and 2 are considered below grade level performance.

Materials and Procedures

Permission to conduct the study was obtained from the Barry University Institutional Review Board and a school district in the southeastern region of Florida. The school district provided permission to gather archival data from a random sample of students identified with EBD. The archival data set did not contain students' names or any other identifying information (e.g., addresses, social security numbers, the name of the school district, etc.) to ensure anonymity/confidentiality of the records. The researcher used student identification numbers to collect the archival information on the students from the school district's educational electronic database including: race/ethnicity, gender, educational placement setting, length of time under EBD designation, number of absences, and academic achievement scores on the Florida Comprehensive Assessment Test (FCAT). To maintain the validity of the research, the data was double-checked by the researcher. Once the archival data was collected on the student, the ID number was deleted from the data set.

Twenty-eight cases were eliminated from the data set due to missing or incomplete data (e.g., FCAT scores, number of absences, and/or the start date of the Individualized Education Plan). Upon completion of the data collection, the students were placed into one of the three groups. Group 1 consisted of students who spent 0 minutes weekly with students with disabilities (general education setting), Group 2 consisted of students who were receiving more than 0 but less than 1,000 minutes weekly in Exceptional Student Education classes (resource), and Group 3 consisted of students who were receiving more than 1,000 minutes weekly in Exceptional Student Education classes. Group 3 was considered the self-contained group. The data set was then analyzed and an AVOVA and correlation was utilized.

Measures

Academic Achievement. Academic Achievement was assessed with the Florida Comprehensive Assessment Test (FCAT). In Florida, the FCAT is used to measure student achievement on grade-specific standards and benchmarks. The FCAT assesses students' abilities in the following areas: reading, writing, mathematics, and science. The FCAT has been used in past studies to determine the effectiveness of academic interventions (Martindale, Pearson, Curda, & Pilcher, 2005; Alderman, 2008). The FCAT math and reading portions show reliabilities of .88 or higher and validity of .80 or higher (Florida Department of Education, 2004). FCAT achievement levels range from 1 through 5, with 5 being the highest. FCAT levels are based on the same scale score regardless of grade. Therefore, a level 1 or 2 performance in all grade levels signifies below grade level performance. A level 3 score is on grade level, and a level 4 or 5 is above grade level.

Student Records. The school records of each participant were reviewed and data was collected on the following variables: race/ethnicity, gender, designation of educational placement, length of time with EBD designation, number of absences, and academic achievement scores. Designation of educational placement was defined as the number of minutes spent weekly in Exceptional Student Education classes.

Results

The results will be reported based on each hypothesis. Hypothesis 1 stated that students with EBD who are educated in a self-contained setting will have better academic performance when compared to those students with EBD who are educated in the general education setting. The null hypothesis stated that students with EBD who are educated in a self-contained setting will have the same academic performance when compared to those students with EBD who are educated in the general educating setting. Additionally, it was expected that students in self-contained classes would have less absences than students who are placed in general education.

A one-way ANOVA was computed comparing the FCAT Reading scores of students in the three different educational placement groups. A significant difference was found among educational placement groups ($F(2,228) = 6.93, p < .05$). To determine the differences, a Tukey's HSD was computed, students in group 1 (general education setting) scored significantly higher on the FCAT Reading ($M = 2.27, SD = 1.17$), than did students in the self-contained group 3 ($M = 1.65, SD = .87$). The FCAT Reading scores of students in group 2 ($M = 1.88, SD = 1.10$) were not significantly different the FCAT reading scores of students in groups 1 or 3.

To find out if there was a difference between groups on FCAT Math, A one-way ANOVA was computed comparing the FCAT Math scores of students in the three different educational placement groups. A significant difference was found among educational placement groups ($F(2,228) = 24.28, p < .05$). To determine the differences, a Tukey's HSD was computed, students in group 1 (general education setting) scored significantly higher on FCAT Math ($M = 2.65, SD = 1.07$), than did students in group 2 (resource) ($M = 2.24, SD = 1.17$) and students in group 3 (self-contained) ($M = 1.58, SD = .78$).

A one-way ANOVA was computed comparing the number of absences of the three educational placement groups. No significant difference was found in the number of absences among the groups ($F(2,228) = 2.32, p > .05$). Therefore, the null hypothesis was not rejected and the alternative hypothesis could not be accepted. To further analyze the data regarding the impact that absences might have on achievement in EBD students, a Pearson Correlation was computed. A significant moderate correlation was found between number of absences and FCAT reading scores ($r(229) = .58, p < .05$) and a significant but weak correlation was found for FCAT Math Scores ($r(229) = -.15, p < .05$). Thus, suggesting that absences do have some effect on academic achievement, but not on educational placement.

Hypothesis 2. Stated that it is expected that there will be a positive correlation between the length of time the student has been designated as EBD and their academic performance, with those having the designation longer (number of years) having a more positive academic outcome. The null hypothesis stated that there will not be a positive correlation between the length of time the student has been designated as EBD and their

academic performance. Pearson Correlations were computed to investigate the relationship between length of time the student has been designated as EBD and their academic achievement. A non-significant weak correlation was found between length of time and FCAT reading scores ($r(229) = .095$ $p > .05$) and for length of time and FCAT Math scores ($r(229) = .090$ $p > .05$). Therefore, the null hypothesis was not rejected and the alternative hypothesis could not be accepted.

Hypothesis 3. Stated that there will be a gender effect for the EBD designation, with girls showing a more positive academic outcome than similarly matched boys. The null hypothesis stated that there will not be a gender effect for EBD designation. For hypothesis three, the 31 girls in the sample were matched on grade level, number of years in ESE, and time spent with disabled peers with 31 boys from the sample. A multivariate ANOVA was computed for FCAT Reading, FCAT Math, gender, and EBD group. The main effect for gender was not significant $F(1, 56) = 1.01$ $p > .05$ for FCAT Reading and for FCAT Math $F(1,56) = 1.45$, $p > .05$. Therefore, there were no gender differences between FCAT Reading and FCAT Math levels. There was no significant interaction between gender and EBD group $F(2,56) = .15$, $p > .05$.

There was a main effect for EBD placement and FCAT Reading $F(2, 56) = 4.51$, $p < .05$ and FCAT-Math $F(2, 56) = 6.19$, $p < .05$. In terms of FCAT Reading, EBD group 1 (general education) had the highest mean score ($M = 2.30$, $SD = 1.30$) and this score was significantly different from the mean score obtained by group 2 ($M = 1.44$, $SD = .62$) and group 3 ($M = 1.57$, $SD = .843$). There was no significant difference between the mean for group 2 and group 3. For FCAT Math, there was a significant difference between scores for group 1 ($M = 2.35$, $SD = 1.19$) and group 3 ($M = 1.39$, $SD = .72$), but not between

group 1 and group 2 ($M = 2.25$, $SD = 1.00$). There was a significant difference between group 2 and 3. Based on the results, hypothesis three, indicating a gender difference in academic outcome was not supported. Therefore, the null hypothesis was not rejected and the alternative hypothesis could not be accepted.

Discussion

The present study provides additional information about the academic functioning and educational placement of students in EBD placements. Hypothesis 1 that students with EBD who were educated in a self-contained setting will have better academic performance when compared to those students with EBD who are educated in the general education setting was not supported. Therefore, students in self-contained placements did not perform better academically than did students in resource or in the general educational settings. The students with EBD in general education had the best educational outcome. This finding is supported by Lane et al.'s (2008) study that students with EBD in self-contained settings are performing below grade level, but not supported by the findings in previous studies that there is no significant difference in the academic performance of students with EBD across various educational settings (Anderson et al., 2001; Reid, et al., 2004). There are plausible explanations for the observed result. It is possible that the EBD students in general education have less behavioral issues. Second, a focus on behavior management may supersede effective academic instruction for students with EBD in the self-contained setting. The second explanation is cautioned because information on programming was not obtained for this study. It may be possible that as students begin to make behavioral or academic gains; their educational placement may be changed from self-contained to resource to general education. Third, the severity

of behavioral variables (e.g., school adjustment, internalizing, and externalizing) may explain the academic performance of students with EBD in the self-contained setting.

As part of Hypothesis 1 it was expected that students in self-contained classes would have less absences than students who are placed in general education. The number of absences across the groups was not significantly different. The mean number of absences for the general education was 10.20, resource was 11.27, and self-contained was 13.90. This finding was supported by a previous study that sought to examine the impact that attendance rates have of the academic performance in a sample of 42 students with EBD and found no significant results (Anderson et al., 2001). Thus school attendance rates in EBD students appear to have little impact on educational placement. However the present study did find that there was a moderate correlation between number of absences and FCAT Reading level and a weak correlation between the number of absences and FCAT Math level.

The present results did not support hypothesis 2 as it was expected that there would be a positive correlation between the length of time the student had been designated as EBD and their academic performance, with those having the designation longer (number of years) having a more positive academic outcome. The mean in EBD designation time for students in group 1 (general education) was 5.30, group 2 (resource) was 5.38, and group 3 (self-contained) was 5.12. There was no correlation between the time designated as EBD and academic achievement in reading or math. Therefore the numbers of years spent in special education services was not related to academic achievement. The explanation for this finding may be that reading and math abilities tend to remain stable over time as found in a previous study on the academic achievement of

students with EBD (Nelson et al., 2004). In some cases, difficulties in reading and mathematics may increase over time. Difficulties that students with EBD experience over time in reading may be due to their reading comprehension skills not improving commensurately with their reading fluency skills as there is a shift from learning to read in elementary school to reading to learn in middle and high school (Lane et al., 2008).

As for mathematics, an explanation for this trend may be that students with EBD do not get the chance to take higher level math courses when they enter middle school. They may be enrolled in beginner or intermediate math courses (Nelson et al., 2004). Difficulties in reading comprehension may impact the students' ability to gain entrance into math classes that involve higher reading skills.

The last hypothesis that there will be a gender effect for the EBD designation, with girls showing a more positive outcome academically than similarly matched boys was not supported and girls with EBD did not perform better academically than similarly matched boys with EBD. Thus, boys and girls with EBD appear to experience similar academic achievement deficits. These findings are consistent with previous research that found that boys and girls with EBD have similar levels of academic achievement (Nelson et al., 2004).

The present study had a larger sample size of students with a primary designation of EBD, and the ethnic makeup was more diverse than previously published studies. However, the sample of students was drawn from one school district in one geographic location which may not be representative of the population of public school students with EBD. One suggestion for future research would be to include students with EBD across a wider geographic area.

A second limitation pertains to the measurements of academic performance. Although, FCAT scores are used to determine the academic achievement of students, cognitive functioning (IQ score) was not considered when examining the academic achievement of students with EBD. The school district that the data was collected from does not consider IQ as a factor of determining eligibility. Moreover, there was no way to determine if the academic deficits were related to IQ. Other studies have found IQ to not be important when examining the academic performance of students with EBD (Nelson et al., 2004). However, these studies have found that behaviors (internalizing and externalizing) are related to the academic achievement skills of students with EBD which leads into the third limitation of the present study. There was no measure of the severity of the behaviors displayed by the students. Therefore, future studies should include measures of students' current social/behavioral functioning. It is possible that students with less severe behaviors are in an inclusion or general education setting while students with more severe behaviors are in resource or self-contained placements.

A final limitation of the study is that the original archival data was collected by someone else; therefore, the researcher did not have any quality control over the data collection process. The data could have been susceptible to inaccuracies when it was entered into the educational electronic database. Suggestions for future research would be to interview the individuals who originally collected the data. This would provide the investigator with a better understanding of how the data was collected in order to determine if the archival data would affect the validity of the results.

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