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# Evidence-Based Interventions for Elementary Students with Emotional or Behavioral Disorders

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**Evidence-Based Interventions for Elementary Students with Emotional or  
Behavioral Disorders**

by

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## Chapter I: Introduction

Students identified with Emotional or Behavioral Disorder (EBD) have problematic behavior and impaired social skills that interfere with developing friendships, but these same challenges also lead to negative impacts on student learning and academic achievement (Trout, Nordness, Pierce, & Epstein, 2003). In a recent study published in *Beyond Behavior*, researchers Cynthia Farley, Caroline Torres, Cat-Uyen Wailehua, and Lysandra Cook highlight “an increasing acknowledgment that strong academic instruction and interventions may be the first line of defense in working effectively with students with EBD” (2012, p. 37). It is our responsibility as special educators to provide evidence-based interventions to our students so they are able to make academic gains.

Trout et al. (2003) provided various evidence-based interventions for students with EBD were highly beneficial to their academic success. Students with EBD evidence significant academic deficiencies. On average, these students perform 1.2-2 grade levels behind their peers while in elementary school. This is a concern for schools for EBD students and many times the education team struggles with what to do for the struggling student. Given the challenges that teachers of students with EBD face, it is important they incorporate evidence-based interventions into their classrooms to maximize their teaching effectiveness (Ryan, Pierce, & Mooney, 2008).

The purpose of this paper is to review the literature that examines the effectiveness of evidence-based interventions for students identified with emotional or behavioral disorder. There are a variety of evidence-based interventions and this paper will focus on four of those and examine their effectiveness. The four interventions that will be examined are: peer-

assisted learning, self-monitoring, praise, and choice-making. I chose these four interventions because I wanted to research four common interventions primarily for elementary students with emotional or behavioral disorders that I could apply more effectively in my classroom. Chapter I provides a definition of these interventions as well as a description of the types of behaviors often experienced by students with emotional or behavioral disorders.

### **Research Question**

One research question guides this review of literature:

1. To what extent are these four interventions effective?
  - Choice Making
  - Peer-Assisted Learning
  - Positive Reinforcement
  - Self-Monitoring

### **Focus of Paper**

The review of literature in Chapter II includes studies with participants who are identified as having an emotional or behavioral disorder. My main focus for this research was to identify four different evidence-based interventions for elementary aged students identified with this disability. Upon researching this topic, I found many interventions for elementary through high school aged students. I wanted to focus primarily on elementary aged students and this narrow focus produced numerous studies and literature suitable for inclusion in Chapter II.

I started by exploring research literature on the topic of Emotional Behavior Disorder. I used the Academic Search Premier and an Advanced Google search. My search included

using keywords: *Emotional Behavioral Disorder (EBD)*, *Emotional Behavior (EB)*, *research based*, *evidence-based*, *strategies*, *teaching practices*, *social skills*, *special education*, *instructional practices*, *choice*, *peer-learning*, *peer assisted learning*, *peer-teaching*, *self-monitoring*, *self-assessment*, *praise*, *elementary*, *positive reinforcement*, and *interventions*. I also searched authors from some of the articles of literature I located with these topics, to see if the author search would include more articles with relevant information for my research.

### **Importance of the Topic**

Ryan, Pierce, and Mooney (2008) stated that students with emotional or behavioral disorders (EBD) struggle in school, perhaps more than any other group of students and their struggles impede on development of meaningful relationships with peers and teachers. Building relationships in school is such a crucial part of academic success in school. Students referred to as children and youth with “emotional/ behavioral disorders,” “emotional difficulties,” or “emotional disabilities” (ED), are among the least successful of all students (Bradley, Dolittle, & Bartolotta, 2008; Kern, Hilt-Panahon, & Sokol, 2009). Creating awareness for this topic to provide evidence-based interventions to this group of students identified as EBD is crucial for the students learning potential.

### **Definitions of Terms**

**Choice-Making:** An intervention that promotes engagement by providing the opportunity for student decision-making and agency with regard to assignment choice and/or order (Choice-making, n.d.).

**Emotional or Behavioral Disorder (State of Minnesota Definition):** Students who need specialized services for emotional or behavioral supports for a wide range of complex



and challenging emotional or behavioral conditions. Medical, biological and psychological conditions as well as genetic dispositions can affect these students' ability to learn and function in school (Emotional or behavioral disorder, 2012).

**Evidence-Based Interventions:** Practices or programs that have peer-reviewed, documented empirical evidence of effectiveness. Evidence-based interventions use a continuum of integrated policies, strategies, activities, and services whose effectiveness has been proven or informed by research and evaluation (Evidence based interventions, n.d.).

**Peer-Assisted Learning:** A class wide peer tutoring program. Teachers carefully partner a student with a classmate. The pair works on various activities that address the academic needs of both students. Pairs change over time (Peer-assisted learning, n.d.).

**Positive Reinforcement:** The offering of desirable effects or consequences for a behavior with the intention of increasing the chance of that behavior being repeated in the future (Positive reinforcement, n.d.).

**Praise:** The act of expressing approval or admiration; commendation; laudation (Praise, n.d.).

**Self-Monitoring:** An effective tool for behavior change in which the student: (1) measures and records his or her own behavior (measurement), and then (2) compares that recorded behavior to a predetermined goal (evaluation) (Self-monitoring, n.d.).

## Chapter II: Review of Literature

The purpose of this literature review is to examine the effectiveness of four evidence-based interventions for students with emotional or behavioral disorders. This chapter is organized into four major sections: studies that analyzed the effectiveness of *peer-assisted learning or peer learning, self-monitoring, positive reinforcement/praise, and choice making*. Studies within each group are presented in this order.

### Summary of Chapter II Findings

The study by Gable, Tonelson, Sheth, Wilson, and Park (2012), reveals how special education students with emotional disabilities (ED) represent an underserved academic population who fail to succeed both academically and socially. According to the study, evidence has shown that students with ED are the most challenging group of the 13 categories of diagnosed disabilities. The behavioral issues these students exhibit make it more difficult for teachers and staff to teach these behaviorally challenged students. This population typically has high absenteeism, higher retention rates, higher dropout rates, lower competency test scores, and a greater number of disciplinary referrals, suspensions and expulsions than any other group of students. Often individuals with ED develop self-destructive behaviors that may lead to drug and/or alcohol abuse and the resulting social or legal consequences.

Since some of the instruction received by students with ED occurs in general education classrooms and is expounded upon by their special education classroom teachers, Gable et al. (2012) wanted to determine what effect these teachers have on the success of students with ED. It is hypothesized that if teachers are better prepared; if teachers see the importance of incorporating evidence-based strategies; and if teachers put into practice these

evidence-based strategies, then students with ED will become more successful. Evidence-based strategies are defined as those plans of action for which an outcome is measurable.

Participants for this research study were voluntarily recruited from public rural, urban, and suburban schools representing all grade levels in an unidentified mid-Atlantic state. Principals were asked to distribute surveys to selected general education teachers who taught students with ED and to special education teachers. A total of 1588 general education and 1472 special education teachers responded to the survey. Educators were asked to answer questions that would give the researchers an idea of teacher perceptions regarding current evidence-based practices for students with ED. Participants answered questions addressing their professional demographics, site demographics, and evidence-based practices. A 5-point Likert scale was used for respondents to indicate the most appropriate answer to questions concerning evidence-based practices. Their responses indicated their perceived level of (a) importance, (b) usage, and (c) level of preparation to implement each of 20 evidence-based practices in Figure 1.

PBIS	Positive Behavior Intervention System and support	PMI	Program of peer-mediated intervention to promote positive behavior skills
FBA	A formal procedure to develop Function-Based Interventions	SSI	Social Skills Instruction taught as part of regular classroom instruction
CRE	Clear Rules/Expectations	AMP	Anger Management Program
GOC M	Group-Oriented Contingency Management	SMAB	Instruction in Self-Monitoring of Nonacademic Behavior
CIP	Crisis Intervention Plan for emergency situations	CRP	Conflict Resolution Program
CIM	Curricular/Instructional Modifications and academic supports	CMO	Choice-Making Opportunities
CL	Systematic approach to Cooperative Learning	SMSP	Instruction in Self-Monitoring of Student Performance
SI	Specialized Instruction to promote learning and study skills	PR	Use of Peer-Reinforcement to promote appropriate student behavior
PCIS	Pre-Correction Instructional Strategies	BC	Behavior Contracts
PAL	Peer-Assisted Learning	BSM	Behavior Support Management Plan

**Figure 1.** Evidence-based practices related to emotional or behavioral disorders.

The researchers used the Intervention Method of study as an exploratory diagnostic agent to gather information that will ultimately improve the academic and social conditions of students with ED. In this case the students with ED represent the dependent variable as their continued success or failure hinges on the teacher's' ability to become better qualified and put the evidence-based protocols into practice.

Researchers in this study used Descriptive Statistics to analyze the data. Results revealed that there was little variation among the responses of participants across all school demographic levels. When answering the question about the importance of evidence-based practices, over 80% of both general education and special education teachers basically agreed on the importance of most evidence-based practices. Their general response to having or using evidence-based practices showed that less than 40% put these strategies into use. Overall, teachers felt unprepared to effectively teach students with ED the social and behavioral skills necessary for appropriate academic development. These results are significant because the lack of teacher preparedness in these areas directly impacts the future societal success of students with ED.

Limitations that may have impacted the survey results include self-reported data that could not be verified for accuracy; biased answers based on lack of understanding; less than ideal participation rate; failure to include more strategies familiar to respondents; author error or biases in the selection and criteria process; and finally, the sampling may not have been representative of teachers across the country. These discrepancies placed limits on researchers to be able to draw general conclusions on the results.

The findings of this study were also substantiated in previous investigations (Wagner et al., 2006) which suggest that most students with ED do not receive an education based on empirically-supported practices (Landrum et al., 2003; Simpson, Peterson, & Smith, 2011). The result is increased teacher burnout and increased student failure rates. Other studies have shown that students with ED are deficient in social skills and require intensive instruction and support to correct these deficiencies. Researchers in this study emphasize the need to provide educators and staff with adequate preparation and support at all levels to empower students with ED to reach their greatest academic, social, and behavioral potentials. It is critical that this preparation begins with pre-student teacher instruction and additional in-service requirements for those who work with students who have emotional disabilities. This study addresses that critical need and contributes to the efforts to educate school personnel to a level of demonstrated mastery in each area of evidence-based practices.

### **Peer-Assisted Learning (PAL) or Peer Learning**

Table 1

#### *Peer-Assisted Learning*

Author(s)	Study Design	Participants	Procedure	Findings
Gable, R. A., Tonelson, S.W., Sheth, M, Wilson, C., Park, K.L. (2012).	Survey	All public schools in the state were asked to participate. The survey was given to five general education teacher who taught students with an emotional disability (ED) in each building, along with all special education teachers who taught students with ED.	A survey to determine respondent perceptions regarding current evidence-based practices for students with ED. (1,472 Special Educators responded)	For 15 of the 20 evidence-based practices, at least 80% of special education teachers chose 'important' or 'very important', while their general education counterparts chose 11 or 55% of the practices as being 'important' or 'very important'. The findings show teachers lack preparation to work effectively with students with ED.

Garwood, J. D., Brunsting, N. C., & Fox, L. C. (2014).	Qualitative	The participants were 79% male, between 11-16 in age with reading levels between third and seventh grade.	The purpose of this study is to focusing on comprehension and fluency as opposed to spelling, and whether more studies are producing reports on treatment integrity.	Most of the study on interventions deals with producing results in student behavior, not necessarily academic achievement. Reading comprehension should be the main focus of interventions with students with EBD, as not allowing for growth in reading can lead to serious academic challenges for students in a secondary setting.
Ryan, B., Reid, R., & Epstein, M.H. (2004).	Qualitative	Participant age was coded into one of two categories: child 5 to 11 years or adolescents ages 12 and older. The most common design was single-subject analysis. The average duration of intervention sessions across studies was 25 minutes. The average number of intervention sessions conducted was slightly greater for children (33) than for adolescents (22).	Peer-mediated interventions were conducted. In the study, the students acted as tutors, and tutee.	This study concluded the use of peer-mediated interventions for students with EBD. Findings included: (a) positive academic outcomes across all types of peer-mediated interventions, (b) inconsistencies in reporting participant characteristics, (c) study settings not reflective of actual placement for students with EBD, (d) a need for additional group studies, and (e) overall high levels of consumer satisfaction.
Wehby, J.H., Falk, K. B., Barton-Arwood, S., Lane, K.L., & Cooley, C. (2003).	Qualitative	Eight students with EBD or EBD-like symptoms were chosen for this study from self-contained classrooms in a single southeastern metropolitan school district. All the students were boys who had been referred to special education services.	The researchers used the intervention method of study as an exploratory diagnostic agent to gather information that will ultimately improve the academic and social conditions of students with EBD. In this case the students with EBD represent the dependent variable as their academic reading achievement hinges on how well the reading intervention strategies affect their learning.	Results revealed that the combined reading intervention strategies were only moderately effective in improving some of the students' academic performances which varied on a week-to-week basis.

According to the study by Garwood, Brunsting, and Fox (2014), students who have been diagnosed with emotional or behavioral disorders (EBD) typically begin their high school careers academically strained, sometimes up to three-and-a-half grade levels below

their peers. They often struggle with internal or external behaviors that hinder their ability to learn and retain information as easily as their peers. Among other areas of academics reading comprehension, one of the most fundamental aspects of the educational experience and beyond, suffers, either plateauing or worsening as the years' progress. Reading interventions that have been implemented for students with EBD in the past have offered mixed results in their effectiveness thus far.

There is a significant lack in research on interventions that exist for students with EBD on a secondary level which focus on reading comprehension and fluency. Many researchers have looked at strategies for students in elementary schools, but not as many have identified what would suit students in middle and high schools. Recent evidence has also suggested that in evidence-based interventions, no data has been presented on the treatment integrity for about half of the studies, which makes it difficult for anyone to determine what's working and why.

The purpose of this study is to determine which research is focusing on comprehension and fluency as opposed to spelling, and whether more studies are producing reports on treatment integrity. Researchers used electronic, hand, and ancestral review processes in order to seek out intervention studies which have focus on reading comprehension and fluency from secondary students with EBD.

First, researchers had to come up with criteria for their searches. They used the following rules when deciding which articles were relevant to their purpose: The studies and articles must (a) contain a school-based intervention with reading comprehension or fluency as the dependent variable, (b) identify and differentiate outcomes for students with EBD,

(c) focus on middle or high school students in a self-contained setting or resource room, (d) implement an experimental, quasi-experimental, or single-subject research design, (e) occur in the U.S. between 2004 and 2012, and (f) published in English in a peer-reviewed journal. They used four databases for their electronic search, using broad terms to narrow down their results for relevance, selecting keywords from their criteria. Initially, 211 articles were found. If the title and Abstract description corresponded to the desired data, the article was selected to be read. The majority of the articles were not relevant to this particular review due to missing one or more factors from the research criteria. The relevant articles were narrowed down to 17.

After the electronic search, one researcher hand searched through published journals, finding three journals which were promising in relevance. Other researchers performed an ancestral review of studies and came up with one article of relevance to their desired search criteria. In the end, a total of nine articles were selected as relevant to this study. Each of these articles used a single-subject research design. The participants in the nine articles were 79% male, between 11-16 in age with reading levels between third and seventh grade.

Four limitations are evident with this particular study. First, while researchers strived to encompass as many articles as possible, it is possible that some were missed due to the inclusion criteria they used, as some studies could have taken place in settings other than schools. Second, the researchers excluded studies in which students who were not diagnosed with EBD were involved and it wasn't made clear whether the results pertained to just the students with EBD or not. Third, there may be studies that exist with the criteria intended that have not been published for one reason or another, so it is not safe to assume there are not



articles out there that have not been seen that could have been helpful in this research. Lastly, information regarding academic results may have been missed in limiting the study to articles that only dealt with empirical data. Some of the studies focused on behavioral changes may have shown an increase in academic achievements as well.

Most of the research on interventions deals with producing results in student behavior, not necessarily academic achievement. Reading comprehension should be the main focus of interventions with students with EBD, as not allowing for growth in reading can lead to serious academic challenges for students in a secondary setting. Only five studies in a 40-year timeframe have focused on reading comprehension of fluency in students with EBD, and the researchers in this study hope to encourage further studies for strategies in these areas. It appears from the studies they found that there could be success in using story mapping interventions, which showed success in two of the studies.

The study by Ryan, Reid, and Epstein (2004), talks about with the increasing number of students in the U.S. who are being diagnosed with emotional and behavioral disorders (EBD). It also concludes graduation rates of these students being a mere 41.9%, and it is becoming increasingly important that researchers continue to study effective techniques in order to cultivate success in these students both academically and behaviorally. Students with EBD face many difficulties and challenges due to negative behaviors, which can directly affect their academic performance resulting in failing grades. This causes a dramatic increase in dropout and truancy rates amongst students suffering from this disorder.

Many researchers in the past have seen a positive relationship between addressing and managing inappropriate behaviors and a student's academic performance. Recent studies are

beginning to focus on the opposite, believing that by addressing the academic deficiencies in students instead, the inappropriate behaviors will begin to decrease as a result, falling in line behind the rest of the students.. Researchers are looking for interventions that are efficient in increasing the academic successes of students with EBD rather than the behaviors specifically. One intervention that has demonstrated success for students in all areas (academically, behaviorally, and socially) is peer-mediation. Peer-mediated interventions take many forms, all of which involve students taking the place of teachers in instruction and helping one another enhance academic performance. It is generally regarded as a convenient and positive method of intervention.

In this study, researchers looked through past studies regarding students with EBD and peer-mediated interventions for academic achievement. They took into account the students' characteristics and whether or not they were adequate representations of the EBD student populace, what academic goals the research covered, the commonly used interventions and the overall effects of the interventions studied.

Researchers only collected articles which (a) were published by a peer-reviewed journal, (b) contained an original report of the research, (c) included manipulation of an independent variable, and (d) included at least one academic measure as a dependent variable. The studies that focused solely on on-task behavior as a dependent variable were excluded from this study, as well as studies in which the independent variable included a psychopharmacological component, and if the results did not show definitive results for students with EBD above all.

The examiners compiled the results of 14 studies in order to collect results for the purpose of this research. Conclusions were made about the implementation of peer-mediated interventions and their effectiveness on academic outcomes. The results supported a positive correlation between peer-mediated interventions and academic performance as well as positive feedback from consumers who had given them a try. The researchers also found that there were inconsistencies in the studies where some failed to cover participant statistics. The study settings also did not give a good general idea of actual placement for students with EBD.

The biggest limitation in this study was the extremely narrow target area of criteria for finding the research articles, with some studies excluded due to the inability for researchers to focus on students with EBD only. The goals were incredibly specific, but it is difficult to generalize the results with so few variables. Effect size was also difficult to distinguish with so few studies presented. The researchers would have had greater success if there were either less variables or more studies which focused on the specifics of their search.

While studies should certainly continue on the effects of peer-mediated interventions with students with EBD, and this study in particular has shed light on the inconsistencies presented by previous research, it would be prudent for schools to take these interventions into consideration as the number of students with EBD continues to increase. Peer-mediation is one intervention that looks above all promising for assisting students and helping to enhance their academic performance.

Ryan, Pierce, and Mooney (2008), focus on how peer-mediated interventions have been effective especially with students with disabilities. Therefore, this study was aimed at

investigating the effects of different types of peer-mediated interventions in students with EBD, the type of interventions commonly used, and the academic outcomes of these interventions. The study also investigated the characteristics of students studied with respect to their age, sex, race, and socioeconomic status and if they reflected the population of students with EBD.

The study involved review of studies that had been completed in the past that targeted peer-mediated academic interventions for students with EBD. A comprehensive study was conducted in which keywords were used to select the articles in the inclusion criteria. Then the articles were hand-picked and those published between 1970 and 2002 were included and the rest excluded and lastly citation and references were checked to identify relevant articles. After the inclusion criteria, out of the 564 studies obtained, only 14 were chosen to be used in the study. In the 14 studies, a total of 169 participants were included with 63% being boys and girls were 16%. Three of the studies used did not provide gender information which accounted for 21%. Five of the studies involved participants between the age of 6 and 11 years while the remaining nine studies involved adolescents aged 12 years and above. Only one study reported on the ethnicity of the participants with 53% being Hispanic, 35% African American, and 12% Caucasian. IQ was included in six of the studies with average intelligence range and it ranged between 56 and 126. Of the studies used, 57% were conducted in public schools, 14% in residential setting, 14% in special day schools, and 14% in psychiatric hospitals. For the public school studies, 71% were carried out in self-contained classroom while 29% in general education classroom.

In the recording of the information obtained, coding forms were provided in which details of the different studies were to be filled. The information included settings, participant's characteristics, treatment implementer, experimental designs and measures, ecological validity, duration, among others. Inter-observer agreement was also used in the collection of data as different coders took down the same details from the same studies. Only data that was consistent between the coders was used in the study.

The study method involved systematic review. The use of previous studies in investigating a hypothesis was largely used in this study as researchers based their findings on the results that had been obtained from the past studies. The collection of different studies investigating a single outcome is believed to be effective in drawing up conclusion regarding a specific intervention. In the studies investigated, the intervention method was largely used. The peer intervention strategies were used in the investigation of the outcome of students with EBD performance in a class setting. The average time for the intervention duration in all the studies was 25 minutes. Treatment designs were also evident in the studies with single-subject analysis being the most commonly used.

In the group design studies, combinations of various statistical tools are used in analyzing the data. The use of effect sizes has been found to be effective in presenting the research results. The effect size is used to represent the strength of a treatment based on the outcome measures. Therefore, a large effect size will mean a greater change in outcome measures. Effect sizes ranging from 0-0.3 are considered small, 0.3-0.8 is considered medium and all above 0.8 are considered large. Therefore, in this study the calculation of individual-subject effect sizes was done using Swanson's methodology which was defined as "the

difference between the mean scores of the last three sessions of both baseline and treatment phase, divided by the pooled standard deviation from both phases represented by the formula  $(U_t - U_b / SD_p)$ " (Swanson, & Sachse-Lee, 2000). The Rosenthal's formula was also used in the calculation of adjusted standard deviation as it is frequently underestimated.

The statistical significance of the results obtained indicate that peer mediated interventions are used to elicit positive behaviors among students with EBD. The results indicate that there was a positive academic outcome across all the peer mediated interventions that had been used in the different studies. Therefore, it can be concluded that it was not by chance that the students with EBD became responsive and performed better in class when the intervention was introduced.

Effect size was calculated for academic achievement on the seven articles that provided the student's performance details. The overall effect size of the seven studies used was 1.875. Six of the studies that used same-age peer tutoring had an effect size of 1.92. The two studies with cross-age peer tutor had an effect size of 1.12. Effect size for the different age groups was calculated with children having an effect size of 0.83 in 3 studies they were included whereas adolescents attained an effect size of 2.55 over four studies.

Based on the results obtained from the studies investigated, several conclusions regarding the use of peer mediated intervention for students with EBD were made. First, there was a recorded positive academic outcome on all peer mediated intervention types used in the studies. Secondly, there were inconsistencies in reporting the characteristics of the participants. It was also realized that the setting of the study did not influence on the actual placement of students with EBD. There was also a need for more group studies and finally

high levels of consumer satisfaction were recorded. The implications of this study is that even though the peer mediated interventions were found to be effective, it should be noted that different types were investigated and there was insufficient data for any single intervention to help reach a firm conclusion.

The limitation of the study was based on the conservative criteria used in the inclusion process. A large number of informative articles were left out on the basis of not being able to distinguish results for students with EBD and other disabilities. Therefore, findings from a small number of studies make it challenging to generalize the results for all EBD students.

According to Wehby, Falk, Barton-Arwood, Lane, and Cooley (2003), historically, documentation has shown children with Emotional Behavior Disorder (EBD) to have difficulties with reading. Students with reading disabilities are more likely to be referred to restrictive settings for serious emotional disturbance than are students displaying other types of academic deficits (McGinnis & Forness, 1988). Most students who have not developed adequate reading skills by the end of the first or second year of school continue to remain poor readers throughout their later school years. Poor reading skills of students with EBD further hinder their already challenged academic progress and social skills necessary for a successful school experience. Low self-esteem, disruptive behaviors, school failures and dropouts are more prevalent in this population of students than with students of other disability groups (Rylance, 1997).

Further compounding the problem is the fact that research has scarcely been conducted to identify effective academic intervention strategies for students with EBD. A review of literature conducted by Coleman and Vaughn (2000), uncovered only eight such

studies that specifically address reading interventions implemented with elementary-age students with EBD. The impact of this problem has far-reaching effects on society at large in terms of antisocial behavior in the form of increased hostility, aggression, and defiance of authority.

Researchers of this study adhere to a hypothesis that if a combination of reading intervention strategies, namely modified versions of the *Open Court Reading* curriculum and *Peer-Assisted Learning Strategies* (PALS), are implemented, then the reading achievement gains will improve for students with EBD. The purpose of this study is to add to previous research efforts of others and measure the effect of these reading intervention strategies on both reading achievement and social behavior of elementary-age students with EBD.

Eight students with EBD or EBD-like symptoms were chosen for this study from self-contained classrooms in a single southeastern metropolitan school district. All the students were boys who had been referred to special education services for various disabilities that included emotional disturbance, learning disabilities, mental retardation or health and speech-language impairments. Six of them were African-American and two were Caucasian, ranging from 7 to 10 years in age. The students had received no formal reading instruction in any classroom prior to the intervention time. They were, however, given a series of standardized pre-tests to determine a baseline of the current reading and language academic abilities for each student; then reevaluated with post-tests.

Each of the combined reading intervention strategies was administered at separate times during the same school day. Instruction was provided both as teacher-directed and peer-tutoring activities. The *Open Court Reading* model bases its instruction on making sounds,



blending sounds into words, and applying these skills to reading and writing. The PALS program was used to provide a more comprehensive reading supplement by pairing higher performing readers with their lower performing classmates who alternated roles between coach and reader to share the benefits of teaching and being taught by each other.

A set of various skill-specific probes was also used to monitor each student's progress throughout the intervention phase. These probes measured student performance on nonsense word fluency, blending, letter-sound correspondence, and sight word recognition (Fuchs, Fuchs, & Karns, 2001). Probe testing was done in a separate minimally distractive room and scored according to the recorded number of correct responses in one minute.

The second dependent variable tested was social behavior using the *Multiple Option Observation System for Experimental Studies* (MOOSES; Tapp, Wehby, & Ellis, 1995) and handheld computers to record students' activity engagement and level of disruptive behavior.

The researchers used the Intervention Method of study as an exploratory diagnostic agent to gather information that will ultimately improve the academic and social conditions of students with EBD. In this case the students with EBD represent the dependent variable as their academic reading achievement hinges on how well the reading intervention strategies affect their learning.

Researchers in this study used Descriptive Statistics to analyze the data. Results revealed that the combined reading intervention strategies were only moderately effective in improving some of the students' academic performances which varied on a week-to-week basis. The academic results obtained in this study are similar to those reported in previous investigations (e.g., Falk & Wehby, 2001) and tend to be characteristic of students with or at

risk for EBD. These results are significant because adequate reading skills are necessary to enhance the academic and social skills of students with ED to enable them to function well in society.

Limitations to this study include the relatively short time period in which the test was administered; a reliance on visual observation alone as a measure to determine changes in social behavior of the participants; and a lack of appropriate generalization measures in reading. Although limited improvements in reading performance were recorded, it should be noted that future research should include long-term interventions conducted with children who are clearly identified with EBD. Reading achievement has become a national focus for all types of learners; which makes additional intervention studies even more vital to addressing the needs of this population of neglected students diagnosed with EBD.

### **Self-Monitoring**

Table 2

#### *Self-Monitoring*

Author(s)	Study Design	Participants	Procedures	Findings
Carter E. W., Lane L. K., Crnabori M., Bruhn A. L., and Oakes P.W. (2011).	Quantitative	From the results collected, at least 3,958 students were involved in an intervention that included one or more aspects of self-determination. At least 3,028 were also found to have participated in control groups. The gender of students was reported in majority of studies with 15 studies not including the gender information. The female students were 725 while the male students were 1,048 and 1,255 students were not categorized.	The study method was systematic review in which previous literatures were used to study and intervention and conclude on the outcome.	It was found that self-management strategies including self-monitoring, self-reinforcement, and self-evaluation can be readily taught to and easily acquired by the students. The skills learned in these interventions could be used in multiple settings to improve academic outcomes as well as socio-behavioral outcomes.

Gable, R. A., Tonelson, S.W., Sheth, M., Wilson, C., Park, K.L. (2012)	Survey	All public schools in the state were asked to participate. The survey was given to five general education teacher who taught students with an emotional disability (ED) in each building, along with all special education teachers who taught students with ED.	They developed a survey to determine respondent perceptions regarding current evidence-based practices for students with ED.	For 15 of the 20 evidence-based practices, at least 80% of special education teachers chose 'important' or 'very important', while their general education counterparts chose 11 or 55% of the practices as being 'important' or 'very important'. The findings show teachers lack preparation to work effectively with students with ED.
Gulchak, D. J. (2008).	Qualitative	An 8-year-old male student in third grade and diagnosed with EBD by his school. The study took place in a public elementary school, in a self-contained classroom.	The study measured on-task behavior (on task behavior was defined in the study) for the student and added in an intervention of self-monitoring using a handheld mobile computer.	The results indicated the student responding positively to the self-monitoring intervention. It increased the student's on-task behavior and when the handheld self-monitoring device was removed, the on-task behavior immediately dropped to baseline levels.
Blood, E., Johnson, J. W., Ridenour, L., Simmons, K., & Crouch, S. (2011).	Qualitative	The participant was a 10-year-old male in the fifth grade with emotional and behavioral disorders. He attended an elementary school in northern Illinois. The student was in a classroom with eight other students. Single-subject changing conditions (A-B-BC) design was used to investigate the differential effects of video modeling and self-monitoring.	An intervention that included video-modeling and self-monitoring intervals on an iPod Touch was used.	The results of the study reveal the student responded positively to both the video-modeling and the self-monitoring using the iPod, compared to baseline data. He improved his on-task behavior and decreased disruptive behavior with video modeling and self-monitoring combined.
Denune, H., Hawkins, R., Donovan, L., McCoy, D., Hall, L., & Moeder, A. (2015).	Qualitative	14 EBD middle school students, 11 boys and 3 girls. The lead teacher who was also a participant was a 34-year old female who had 2 years of experience teaching in this setting. She was also licensed to teach in middle school and special education. An	Intervention method was used as a specific intervention was introduced and the outcome investigated. The introduction of the group contingency and self-monitoring practices in the classroom was the intervention in this	The self-monitoring intervention was found to be effective over a long period of time as it led to decreased disruptive behavior and increased on-task behavior among students with EBD.

		assistant teacher and instructional aide were also present in the classroom during the study.	study of which the outcome which was in relation to the student's behavior was examined.	
Wills, H., Kamps, D., Fleming, K., & Hansen, B. (2016)	Quantitative	A total of 313 students in grades Kindergarten to grade 6 to experimental and control groups. They attended 159 classrooms in 17 schools. The study spanned four years. It was a randomized control group study.	The study examined the effects of Class-Wide Function-related Interventions Teams (CW-FIT), an intervention for increasing on-task behavior and disruption for EBD students in elementary school. The teachers increased praise and reduced reprimands to individual students.	The primary finding was that high-risk students served in classes receiving the intervention CW-FIT, increased their time on task and decreased their disruptive behaviors. Also, the average percentage of on-task behavior during intervention conditions increased.

The study by Carter, Lane, Crnobori, Bruhn, and Oakes (2011), says students with Emotional and Behavioral Disorders (EBD) face many challenges in their education pursuits. Self-determination has been identified as a characteristic that reflects an individual's understanding of their strengths and weaknesses. Students with EBD have a difficult time to applying the self-determination aspect in their studies as well as their life. Therefore, this study explores the use of self-determination as an intervention for students with EBD. The researchers for the study evaluate the type of students and the educational context that self-evaluation was used as an intervention and which components of self-determination were investigated. The study was also investigating if self-determination has ever been used as an intervention and to what extent was it used.

The study was systematic review-based and therefore, it involved the use of previous studies in making conclusions. The inclusion criterion was used in which articles to be used had to meet certain features set by the researcher. The multiple-gating procedure was used and the first stage involved review of titles and abstracts. In the second stage each article was

reviewed based on target population, type of article, setting, and the presence of self-determination aspect. The studies were also required to be aimed at EBD students. A total of 81 studies met the criteria and they were selected for the study. The articles were searched electronically in the fields of psychology and educational databases.

In the 81 students selected, it involved 16,426 students who were participants. From the results collected, at least 3,958 students were involved in an intervention that included one or more aspects of self-determination. At least 3,028 were also found to have participated in control groups. The gender of students was reported in majority of studies with 15 studies not including the gender information. The female students were 725 while the male students were 1,048 and 1,255 students were not categorized. Based on ethnic disparities, the studies involved 173 African American, 12 Asian American, 248 European American, 29 Latino/Hispanic, Native American 1, and 88 students from other ethnicities. The rest 2,477 were not categorized based on ethnic lines. Based on the school level, 322 students were of high school level, 989 middle schools, 1,489 elementary school and 87 students were not clearly reported on education level. The settings of the studies also varied from general education to self-contained classrooms.

The study method was systematic review in which previous literatures were used to study and intervention and conclude on the outcome. In this case, the study involved self-determining intervention in which students were taught to engage in one or more self-determining behavior. Various components of self-determining interventions were studied in which the study was investigating the most effective when dealing with students with EBD.

The intervention was conducted in a class setting where students with EBD were carrying out their learning activities. The observation method was frequently used in the study.

A comparison of the studies that involved interventions and that of students who were involved in comparison group. From the studies carried out, various interventions of self-determination had been used and self-management and self-regulation strategies were found to be the most common with 65% of the studies using it. This can be attributed to the recognition of self-regulation deficits on students with EBD. Therefore, by the teaching of self-management skills, students can be greatly involved in assessing, evaluating and directing their own performance. The statistical significance of the results obtained indicates that self-determination interventions can be used in increasing self-management among students with EBD.

From the results obtained, it is evident that there is a high amount of literature that covers the various self-determination interventions on students with EBD. A total of 16 self-determination interventions components were investigated in the studies reviewed. It was found that self-management strategies including self-monitoring, self-reinforcement, and self-evaluation can be readily taught to and easily acquired by the students. The skills learned in these interventions could be used in multiple settings to improve academic outcomes as well as socio-behavioral outcomes. Goal setting and problem-solving interventions were also found to be well represented as well as effective in their outcomes when compared to the others. The implication of the study is the broader search used in the inclusion criteria which involved various settings. However, the general classroom setting was the majority based on the search of students with risk of EBD who are found in general education setting. Therefore,

due to the broadness of the study, it would be important to note that the findings cannot be relied upon when dealing with a single group of students with EBD. The limitation of the study can be attributed to the addressing of narrow range of self-determination interventions also various gaps of knowledge were identified in the used studies.

According to Gulchak, (2008), students with emotional or behavioral disorders (EBD) often present challenges in the classroom that can disrupt and derail the learning experience for themselves and their peers. Self-monitoring is an intervention that has been introduced in the classrooms, which is a means of assisting students from typical development through a wide range of other developmental disorders in becoming more self-aware and observing their own on-task or off-task behaviors as well as academic performance. There are many different areas in which a student can self-monitor depending on the preferences and goals set out by their teacher and researchers, however the majority of studies have only used paper and pencil worksheets in order for students to record their data.

With recent technological advances in mobile and handheld computing, it seems an alternative to collecting data digitally has presented itself for use in an educational setting. The speed, ease of use, and accuracy of mobile computers in the business world has shown positive results. Students who have used mobile devices in their classrooms for reasons other than self-monitoring have shown enthusiasm towards the handhelds, and an increase in performance. Researchers explored the results of self-monitoring on-task behaviors in students with EBD using a mobile device and examined whether or not there is an improvement in on-task behaviors while using the mobile device.

This study's participant was an 8-year-old male who had been diagnosed with EBD and had been receiving Special Education services since kindergarten. The boy was of average intelligence and performed at an average range academically, but showed signs of serious and significant behavioral problems.

Research and data was collected in a single classroom in a public elementary school under the supervision of a male teacher certified to teach students with EBD. The dependent variable in this study was on-task behavior of the student, which included keeping his hands away from his face, completing work, and participating in class discussions—the teacher had expressed to the researchers that the student had distracted from tasks significantly by picking his nose, so this was factored into the research process. Observation sessions, which took place during a reading period, provided six opportunities a day for the student to self-monitor his on-task behavior on his handheld device, a Palm Zire 72. The data collected from the mobile computer was used to verify the treatment integrity of the information.

The design of this study was an A-B-A-B withdrawal design, which would reflect the connection between the self-monitoring intervention and the student's on-task behavior. During the baseline phase, there were no changes made to the daily routine of the reading period of the classroom. The student's on-task behavior was noted by the researcher, and the teacher was told not to address the student on his on-task behavior throughout the session. During the intervention phase, the student was instructed on self-monitoring as well as the use of the handheld device. On-task behaviors were clearly defined for the student's understanding. The student collected the data on his behaviors with the device, which was kept at his desk for his ease. At the end of the observation session, the student ran a report on



the device and graphed his on-task behaviors on a spreadsheet using the information provided throughout the session. As the on-task behaviors of the student began an incline, baseline conditions returned. The handheld was taken from the student temporarily and once there was a decrease in the on-task behavior (after 2 days), the mobile computer was returned to the student to return to self-monitoring.

Evidence through the completion of this study supports the researcher's inference that a student can use a handheld device to self-monitor his on-task behavior. The student was able to use the device with ease and responded positively to the device; his peers even expressed a desire to begin a similar procedure for themselves. His on-task behaviors showed an upwards trend during the times in which he had the device, and the trends began a decline when the device was taken away.

Notable limitations are apparent in this study. The first limitation is that on-task behavior was manipulated in various ways either by the teacher, the paraprofessionals in the classroom, the student's motivation, and distractions amongst his peers. Another limitation is that the study focused solely on the on-task behaviors of the student, which does not necessarily mean the student will excel academically.

As further research on the topic of self-monitoring and the advancement of technology revolving around handheld devices may be necessary, it would do well to note the results of this particular study in the use of mobile computing for self-monitoring, as they demonstrate the intervention's effectiveness with students with EBD. Computing tools are becoming more widely popular as an option for learning and data collecting in an educational setting, and

once more generalized studies begin there may be positive changes in the management of classrooms around the world.

The study by Blood, Johnson, Ridenour, Simmons, & Crouch (2011) talks about how students with emotional and behavioral disorders (EBD) present many disruptive behaviors in the classroom which can have a negative impact on the learning experience for themselves and their peers. This can not only put a strain on student morale but can also serve as a stressor for educators, overall creating a high tension atmosphere in the classroom. Classroom management that includes highly effective interventions such as self-monitoring and video modeling can help to assuage these behaviors and keep students with EBD on-task and engaged in their assignments.

Self-monitoring has shown evidence of being a successful way to keep students on-task, asking students to self-record their behaviors and ascertain what it means to be on-task, however most research and implementation has required students to self-monitor using paper and pencil worksheets. Some research using handheld devices to record this data instead has shown that self-monitoring with mobile computers can be both easy to learn and reinforces enthusiasm in students, assisting in cultivating more on-task behaviors. In this study, researchers aimed to find out the effectiveness of both video modeling and self-monitoring using a handheld mobile device.

There was one student participant in this study, a 10-year-old fifth grade boy with multiple EBD. He was being assisted with Special Education services in reading, language arts, writing, and math and participated in a modified curriculum in General Education for science, social studies, music, and physical education. The student participated in a separate

recess from his peers due to the challenges he presented with impulse control and other disruptive behavior. Prior to the study, the boy's teacher had introduced a daily check-in/check-out point system for him, in which he would earn points for completing work and performing appropriate behaviors. His points would earn him prizes and he would select the desired prizes at the beginning of each day. This system remained in place throughout the study.

Dependent variables in this study were the time the student spent on-task and the disruptive behaviors displayed by the student. Data was collected by observers using a data sheet during a period of math instruction in the special education classroom. An A-B-BC design was used by researchers, with one baseline phase, an intervention using video modeling, then another intervention phase with the use of video modeling simultaneously with self-monitoring. During the baseline phase, no changes were made to the daily routine of the student during this math period. When video modeling was introduced, the student was instructed to use the iPod Touch to play a four-minute video which showed same-age peers displaying appropriate behaviors, including following directions and completing tasks that were assigned to them as well as remaining on-task. He would watch the video before his classmates would join him for group work. After this phase, the student was taught to self-monitor and determine which behaviors were on-task and off-task. He played a video that used footage of himself which had been recorded prior to the study. This video played scenes of his on-task and off-task behaviors and he was asked to identify appropriate behaviors versus inappropriate while recording on a self-monitoring sheet.

When he was able to self-monitor and distinguish between these behaviors with 100% accuracy, the second intervention phase was then implemented. The student used the iPod touch and the self-monitoring sheet each day during the math period in which he participated in a math group. A timer was set on the iPod Touch and when it went off, he would record whether he was on-task or off-task. The video was watched prior to the start of the group to remind him of the appropriate behaviors he should be performing.

Researchers were able to distinguish the relationship between the student's on-task behavior and the video modeling and self-monitoring with an iPod Touch he was assigned during this study. Based on the data recorded, the study observed a positive impact on the behaviors presented by the student with EBD. The changes were noted rather immediately once the student viewed the video which helped him see the appropriate and inappropriate behaviors on screen and his ability to determine whether he was on-task or off-task was enhanced by these visuals. These results support those of other studies which suggest that using video modeling and self-monitoring as a way to manage a student with EBD can increase the success of the student and improve the behaviors that are performed in the classroom. The use of the iPod Touch in this study enhanced the ease and portability of the intervention. While time spent recording and editing the videos took time, once completed, the videos used less time consumption to implement into the intervention, thus making for an efficient presentation for the student and teacher. The teacher was asked to provide feedback on the effectiveness of the video modeling and self-monitoring and the response received was favorable, although she believed her student may have been more successful if he had used the video modeling less, as she did not think he took it seriously. She noted that she would be

very likely to use these interventions again, however. There are several limitations of note in this study, one of which being that this involved one student. Overall, it would do well to do further research with multiple students in order to produce more generalized results.

Secondly, being that video modeling and self-monitoring were introduced in this study at the same time, it's difficult to discern whether self-monitoring alone would have had a favorable outcome on the student's behavior. It is possible that in further research, the use of self-monitoring can be implemented in a separate phase for these results to be recorded. The final limitation is that the videos provided for the student were created by the researchers and not the student, making it hard to determine whether this type of intervention is suitable for teachers to try in their classrooms.

Results of this study suggest that a positive outcome can be produced with the implementation of video modeling and self-monitoring, and that the use of an iPod Touch makes the implementation somewhat easier for the teacher.

Denune, Hawkins, Donovan, Mccoy, Hall, and Moeder, A. (2015) reviewed how students with Emotional and Behavioral Disorders (EBD) are usually faced with a lot of challenges when it comes to classroom setting. Their engagement in class activities without disruption is critical to their academic performance. However, students with EBD display disruptive and non-focused behavior in classroom setting hence making it hard for them to accomplish class-based activities. Therefore, identifying procedures that significantly decrease the disruptive behavior of EBD students is imperative to researchers. One proposed intervention is group contingency. The study is aimed at investigating to what extent the inclusion of self-monitoring increases the effectiveness of interdependent group contingency

intervention. The study also expands the literature on interdependent group contingency intervention effects as well as self-monitoring procedures on students with EBD.

The participants involved 14 middle school students and a lead teacher. The students attend an alternative school meant for students with EBD located in an urban setting in Midwestern United States. The student's ages ranged from 12 to 15 years and they included 11 boys and 3 girls. Of the 11 boys, 3 were white and 8 were black while of the 3 girls, 2 were black, and 1 white. These students were placed in this alternative school due to their challenging behavior that resulted from their EBD condition which made it difficult for them to excel in general education setting. Therefore, this alternative school setting was tailor-made to fit their needs and accommodate their challenging behaviors effectively. Information sheets describing the study and its purpose were sent to the parents/guardians through the children providing them with an option to sign if their children were to be involved in the study. Out of the 16 students, 2 were not allowed to participate in the study. The lead teacher who was also a participant was a 34-year-old white female who had 2 years of experience teaching in this setting. She was also licensed to teach in middle school and special education. An assistant teacher and instructional aide were also present in the classroom during the study.

The principal researcher and the two psychology students had code forms in which they recorded their observations. A smartphone application was also used in providing a cue on when the next interval was to begin of recording on-task and off-task behavior. Therefore, the researchers were observing several behaviors displayed by the students during the art class that lasted about 40-45 minutes. The behaviors were divided as either on-task behaviors or off-task behaviors.

The research design used in the study was qualitative as it was used in investigating behavior patterns of the participants. This can also be attributed to the small number of participants in the study which is characteristic of qualitative studies. However, in the carrying out of the study, intervention method was used as a specific intervention was introduced and the outcome investigated. The introduction of the group contingency and self-monitoring practices in the classroom was the intervention in this study of which the outcome which was in relation to the student's behavior was examined. Alongside this method, ABCBC experimental design was also used in measuring the effectiveness of the intervention. In this case, the intervention was introduced, withdrawn and the reintroduced again. This was used to help provide the researcher with concrete evidence of the intervention. In the ABCBC experimental design, it contained various phases and phase A was the baseline, B was the introduction of group contingency intervention, C was the combination of group contingency intervention and self-monitoring procedures, followed by phase B which was withdrawal of self-monitoring procedures and lastly C which included the reimplementation of self-monitoring procedures.

The outcomes for the interventions were evaluated by use of visual analysis of the data. The summary information which included percentage of non-overlapping data (PND) and effect size (ES) supported the visual analysis data. The PND calculation was done by dividing the frequency of intervention types that did not overlap baseline points by total frequency of intervention types. This method was used for data analysis as it provides information regarding the effectiveness of an intervention that is used to supplement visual analysis.

The statistical significance of the results obtained from the study indicates that the intervention introduced had an effect on the on-task and off-task behaviors of the students with EBD in the course of their class activities. However, there was a much more positive response when group contingency was introduced rather than the introduction of the self-monitoring procedure. The withdrawal of the same intervention of self-monitoring had less impact on the behavior of the students. Though, there was a steady increasing trend of on-task behavior and decreased disruptive behavior when self-monitoring intervention was introduced for long as compared to the spontaneous group-contingency intervention.

The standardized mean difference can be used in the measure of effect size between the two treatments. The first treatment which group contingency intervention had a standardized mean of 10.45 on-task behavior as compared to self-monitoring intervention which had a standardized mean of 5.93 when combined with contingency group intervention. Therefore, it can be deduced that group contingency is more effective as an intervention when compared to self-monitoring evaluation.

The results obtained were in line with previous studies that had indicated less significance of self-monitoring intervention when dealing with EBD students. The results obtained higher performance of the students when the group contingency intervention was introduced unlike the slow response when the self-monitoring evaluation was implemented. The self-monitoring intervention was however found to be effective over a long period of time as it led to decreased disruptive behavior and increased on-task behavior among students with EBD. The implication of the study is that it used a small number of participants in a controlled setting which might have impacted the results towards a specific direction.



Therefore, a change of setting can lead to different results and therefore cannot guarantee same results in other settings.

The limitation of the study was that there was no inclusion of testing the effect of self-monitoring intervention on its own and be able to ascertain its effectiveness in the same manner that group contingency was tested. The combination of self-monitoring intervention with another procedure and evaluating it based on the outcome was a drawback in the study.

According to Wills, Kamps, Fleming, and Hansen (2016), studies are continuously being carried out on ways to promote well-managed classrooms that can lead to better education as well as social outcomes. Classroom management has been a problem for teachers dealing with students having Emotional or Behavioral Disorders (EBD). Most of the class sessions are characterized by disruptive behaviors as well as conducting of off-task behavior. Therefore, the study aims to find out if Class-Wide Function-Related Intervention Teams (CW-FIT) can be used on EBD students to help reduce the disruptive behavior and increase on-task behavior. The hypothesis for the study is investigating the effectiveness of CW-FIT strategy on EBD students in behavior management.

The study involved students, teachers and coaches who were involved differently in the study. There was a total of 313 students which comprised of 76 girls and 237 boys in Grades kindergarten to sixth. The study contained of experimental and control groups. One hundred eighty-one students were used for experimental while 132 were placed under the control group. The students attended 17 schools in a total of 159 classrooms. The study period was four years. The inclusion criterion was used for selecting the student participants. Students selected included those nominated by teachers as displaying of disruptive behavior

in class, met the 17 score of at-risk scale of problem behavior, and students who returned a signed informed consent from the parents. Students who had been identified with disabilities 46 were included in the experimental group while 34 were included in the control group. Within the intervention group, 35 students received CW-FIT + self-management and seven others received CW-FIT + help cards intervention. Teachers were randomly selected for either experimental or control groups. For intervention, 76 females and eight males were included while in control 72 females and three males were chosen. Five coaches were selected for the study, all females with 12-26 years of experience in special education, social work, and early education practices.

Help cards were used in the carrying out of the study to help reinforce the effectiveness of CW-FIT. Multiple Option Observation System for Experimental Studies (MOOSES) was used for the direct observation of the student participants. Observers directly participated in the observing of the students during the instructional period that had been selected as the most problematic by the teachers. Dependent measures used in the collection of data included on-task behavior, disruptive behavior, teacher praise, and teacher reprimand. Inter-observer agreement was used in the collection of data. An agreement was scored when a matching code was found in the observer's file in the same window.

The study method for the study was intervention based as the CW-FIT intervention was applied to the participants and the outcome observed. Randomization procedures were also used as participants were randomly selected in either the control or experimental groups. Control group experimental research design was also used as participants were divided into two groups; control and experimental.

In the analysis of data, General Linear Mixed Model (GLMM) was used based on the nested structure of the data collected. The results from the two groups were compared by the use of t-test statistical tool. Based on the results obtained, at the baseline, there were no significant differences between the control and experimental group for on-task behavior with  $t(311) = .13, p > .05, d = .01$ , or student disruptions,  $t(311) = .69, p > .05, d = .02$ . Also it was noticed that there was no difference on teacher reprimands to individual's  $t(311) = .31, p > .05, d = .04$ , or to groups  $t(311) = 1.08, p > .05, d = .13$ . There were however, significant differences with teacher's praise to individual  $t(309.7) = 2.31, p < .05, d = .26$ , and to groups  $t(227.0) = 2.34, p < .05, d = .28$ , with teachers under treatment offering more praise than teachers under control. Time gender and groups were the independent variables. Therefore, in both the on-task and disruption model, the time x group interactions indicated significant differences between control and experimental groups over time  $F(1, 313) = 85.37, p < .001, EST \times C = 1.49$  and  $F(1, 315) = 35.38, p < .001, EST \times C = 1.23$ , respectively. For the on-task behavior, there was a significant increase for the time on task for the experimental group ( $p < .001$ ) as it increased from 65% during baseline to 87% during intervention. On the control group, there was no significant difference from 65% to 67%. Similarly, there were fewer disruptions recorded over time for the experimental group from a mean of 17 to 6 but no much change on the control group from 16 to 14. Therefore, based on the results analysis, it can be concluded that the CW-FIT intervention reduces disruption and increases on-task behavior over time in EBD students.

From the results, it was found that students with high-risks who received the CW-FIT intervention, increased on-task behaviors and decreased disruptions. The students with EBD

also portrayed the same results but the students at risk performed better. The difference of the outcome between the experimental and the control group determine the effectiveness of this approach in teaching students with disabilities. These findings are in relation to implementation of group contingencies where students displayed reduced disruptive behavior and increased on-task behaviors. The implication of the study is the demonstration of how CW-FIT is an effective intervention tool for reducing disruptive behaviors and increasing on-task behaviors in an elementary classroom for students with EBD risks. The limitation of the study was based on the several components of CW-FIT which the study did not identify the most effective ones.

## Positive Reinforcement/Praise

Table 3

### *Praise/Positive Reinforcement*

Author(s)	Study Design	Participants	Procedures	Findings
Sutherland, K. S., Wehby, J. H., & Copeland, S. R. (2000).	Qualitative	Two girls and seven boys identified as EBD, ranging from ages 10-11. Six of the students were African American, and three were Caucasian. The setting was a fifth-grade self-contained classroom.	This was an observation-feedback intervention in which a teacher's BSPS (Behavior-Specific Praise of Student) was measured.	The findings provide an understanding of the relationship between behavior-specific praise and on-task behavior of students with EBD.
Allday, A., Hinkson-Lee, K., Huddon, T., Neilsen-Gatti, S., Kleinke, A., Russel, C.S. (2012).	Qualitative	One teacher-student dyad, and three teacher-student triads. Data was collected in general education classrooms located in two elementary schools, in southwestern United States and one middle school in the Southwestern United States and in one middle school in Midwestern United States.	Baseline for behaviors were documented for all teachers. Teachers were then trained in Behavior Specific Praise (BSP) and implemented the BSP within their classrooms and more data was collected on behavior observations.	Rates for behavior specific praise (BSP) increased for all participating teachers. Higher rates of BSP impacted on-task behavior of students with EBD. All teachers in the study decreased their rate of correction statements to all students.
Elswick, S., Casey, L.B. (2011).	Qualitative	One first grade teacher and 20 first-grade students. The classroom was inclusive with several students identified with exceptionalities. The study used an A-B design.	A Good Behavior Game/Intervention started with the class. Behavior-specific praise was used during the intervention.	The results concluded the Good Behavior Intervention/Game produced significant improvements in the behaviors of the students within the classroom.

The study by Allday, Hinkson-Lee, Hudson, Neilsen-Gatti, Kleinke, and Russel (2012) reports teachers of students with or at risk for emotional or behavioral disabilities (EBD) face countless stressful professional challenges throughout their careers. Students with EBD are being scattered amongst General Education classrooms and can often exhibit behavioral changes in which many teachers who have not had proper training or experience in managing may find overwhelming. One strategy to help maintain engagement and reduce

behavioral challenges in a classroom that includes students with or at risk for EBD is to increase the rate of behavior-specific praise (BSP). Offering students praise in the form of a statement which explains which acceptable behavior they are being praised for can enhance the student's ability to remain on task and engaged in classroom activities and discussions. Professional development in BSP is necessary in developing teachers who are more prepared to effectively face the challenges of having students with EBD. Many strategies have been suggested for training teachers in the use of BSP, each with different methods of presenting the information to educators. The researchers in this study believe that further training in BSP is needed to produce positive results on the level of comfort of the teachers as well as the behavior of students in general education classrooms.

Participants in this study came from general education classrooms in two elementary schools in the southwestern U.S. and one middle school in the Midwestern U.S. Included was one teacher-student dyad (1 teacher, 1 student) and three teacher-student triads (1 teacher, 2 students), making four teacher participants and seven teacher-nominated student participants, ranging from kindergarten to sixth grade. Each group was observed at different hours of the day, during times or activities when students seemed to have the most challenges in their behavior.

Researchers used a modified multiple baseline design to collect their information; the second-grade data was collected a year prior to the others due to a halt in the study when the first author had a family emergency, but the rest of the data was collected simultaneously. Observers looked for on-task behaviors of students and collected the data using an application on an iPod touch. Teachers were given a digital voice-recording device with a microphone

clipped to their clothing and their interactions with students were recorded. On average, the students were observed for 27 minutes each session.

Once baseline data was collected, the researchers began intervention with the teachers. Teachers underwent training on BSP where behavior-specific praise was defined and examples were given. They received information gathered from the observations in their classrooms and were provided examples of BSP they had used during their sessions and were welcomed to create a goal of increasing their behavior-specific praise. They were not explicitly encouraged to increase or decrease the BSP, as the researchers wanted to observe whether this occurred naturally once training completed.

The researchers used Descriptive Statistics to analyze the data collected between the four classrooms. The percentages of on-task behavior were averaged out to produce a correlation between teacher rates of BSP and the student engagement, and the majority of the findings produced a strong positive increase in on-task behaviors as BSP was increased. Teachers were asked, following the study, if the training they received was useful. Teachers reported that the likelihood of continuing to utilize the BSP strategy was high, and that they would be reporting the positive results in their classrooms to their colleagues as well. A more interesting response from teachers was that, despite the effectiveness of BSP, they found it difficult to execute the increases.

Limitations in this study suggest that it would prove useful to research further. The first limitation is that the teacher participant may feel inclined to perform better in the presence of an observer and not necessarily produce the same result if they were not in an official session. Another limitation is that the researchers were unable to collect maintenance

data when the program concluded, so there was no follow up to how successful the participants were afterwards. The third limitation is that two of the students were rather inconsistent in their results, and in spite of showing an increase in their on-task behavior on average, it was difficult to conclude whether this was due to the implementation of BSP. The fourth limitation is that students were sometimes observed during activities that they enjoyed, which would have an impact on their engagement.

This study contributes to other research that an increase in the BSP rate for students with or at risk for EBD can help to cultivate on-task behaviors. Researchers maintain that Professional Development in this area should be a strong focus to help teachers and students have a successful experience in the classroom. Teachers in general education classrooms should understand what BSP is and create strategies and goals in utilizing it effectively.

According to Sutherland, Wehby, and Copeland (2000), there are a range of behavioral interventions in which teachers of students with emotional and behavioral disorders (EBD) often utilize in their classrooms in order to meet the needs of their students and manage the behaviors within. These interventions vary in degree of time consumption and focus, but confront the behavioral obstacles students with EBD often present, such as disruption, noncompliance, and aggression. Teachers tend to prefer the less time consuming and more natural strategies when approaching these situations. Teacher praise has proved to be one of these more efficient interventions.

Research has shown that there is a correlation between the amount of teacher praise and the disruptive situations presented by students in General Education classrooms. Disruptions in the classroom appear to decrease when teachers praise appropriate student



behavior, which in turn increases the amount of classroom productivity. Since the effect of teacher praise on students with EBD has not been conducted, but students with EBD often exhibit the off-task behaviors teacher praise seems to reduce, the researchers predict that the outcome will be similar. The researchers believe that as long as the rate of teacher praise is high and the praise offered to students is behavior-specific, the performance of students with EBD will increase as a result.

This research study took place in one classroom in a middle school of a southeastern U.S. city where participants included one teacher and his nine fifth grade students with EBD. Information was gathered and recorded through the Observation Method and feedback was given to the teacher at different intervals in order to review the research goals and sustain the level of accuracy for the study. Prior to data collecting, the observers spent time in the classroom in order for the students to grow accustomed to their presence. The observer and secondary observer sat in the back of the classroom during their observations and collected data by recording information on a data sheet. Each observer recorded the on-task behaviors of the students and the frequency at which the teacher gave Non-Behavior-Specific Praise (NBSPS) as well as Behavior-Specific Praise (BSPS).

In this study, researchers also used the ABAB withdrawal design to investigate the on-task behavior of students in relation to the rate of the teacher's BSPS, they split the observations into four phases: Baseline, Intervention, Withdrawal, and Reintroduction of Intervention. During the baseline phase, the teacher conducted the class as he typically would while the behaviors of his students and the amount of NBSPSs and BSPSs he naturally provided were noted. After data was collected, the teacher then received feedback on the rate

of BSPSs presented during the baseline phase. The benefits of BSPSs were explained and a new goal for a higher rate of BSPSs was set between the teacher and observers, which was then agreed to be met during the intervention phase. The observer would communicate with the teacher before and after the lesson during the intervention phase. At the withdrawal phase, the teacher returned to his normal routine and no feedback was given. The reintroduction of intervention phase brought back the feedback prior to and after each lesson, where the teacher was reminded of the BSPS goals that were set before and was praised for his use of BSPSs.

The researchers in this study used Descriptive Statistics to analyze the data from the classroom they observed. Results revealed what the researchers had initially believed: students with EBD who were offered an increase in BSPS were more on-task and therefore more successful in their classroom environment. When the rate of BSPSs was decreased, their level of attention decreased as well. There was also evidence in the teacher recognizing the value of raising the BSPSs when it was reported to the observers that there was an amount of high aggression from the students at the start of one of the observation sessions. The teacher went on to use a high level of BSPSs to help manage the disruptive behaviors of the students.

There are a few limitations apparent in this study. One of these limitations is that, while the rate of BSPSs increased between the baseline and intervention phases of the observations, as did the rate of NBSPSs, making it difficult to ascertain whether the on-task behavior was entirely related to the level of BSPSs. Secondly, the low number of observations allows for doubt on the accuracy of the amount of teacher praise and students on-task. The study is also limited by its use of one single classroom within a small timeframe, which is not a significant enough sample to form a general conclusion.

The findings reported in this study support the utilization of teacher praise and BSPSs as a strategy to maintain a high level of success in students with EBD. The success rates in students in general education classrooms are comparatively similar. The researchers concluded that not only would students with EBD benefit from a higher rate of BSPSs, their teachers would also benefit from gaining knowledge on the advantages of using BSPSs as a simplistic form of classroom management.

The findings of Elswick and Casey (2011), explains how students exhibiting behavioral challenges in the classroom lead to negative consequences such as discipline referrals and suspension, which take away from class time and hinder their education as a result. Poor classroom management strategies are often to blame for a classroom that suffers these behavioral incidents. The Individuals with Disabilities Education Act (IDEA; 1997) was enacted in order to put interventions and strategies in place for teachers and enable them to take more initiative in dealing with inappropriate behavior without having to take strict measures. Teachers have noted that they prefer not to take too much time out of class to address the issues, so research is always looking for more efficient techniques that are not as time consuming. The Good Behavior Game (GBG) seems to be the favorite in these studies.

The GBG is a game based on reinforcement. Students, by demonstrating positive behaviors, are rewarded as a group, which teaches them to hold themselves as well as their peers accountable for their actions. Inappropriate behaviors are noted as opposed to positive, and at the end of the day the less amount of negative marks, the better. The GBG has proved to work in almost any situation, with any age group, and any populace, but the effect the GBG has on teachers has not been widely researched. One study reported by Lannie and McCurdy

(2007) showed that the implementation of the GBG had little influence on the teacher's communication with students. Teachers reprimand students more than they praise them in grades 1-12. The researchers in this study used evidence-based interventions to discover the effect positive student behavior has on the teacher, rather than the other way around. Treatment integrity was a priority in this study and heavily monitored through direct observation and using checklists. The emphasis on the treatment integrity was by design, if the intervention was not strictly followed the results would be inaccurate. Researchers designed this study to be student versus teacher. Students would earn points back for demonstrating good behavior without prompting.

Participants in this study were one first grade teacher in a general education classroom with twenty students in an urban public school. A few of the classroom's students identified with exceptionalities, and their selection was determined by multiple referrals to the school social worker to create Behavior Intervention Plans (BIPs) and the amount of office referrals for behavior which hampered the learning process.

The GBG began at the same time each day, during Reading instruction which was followed by independent work relating to the topic discussed during instruction. The teacher was provided with a manual for reference to help with the treatment integrity of the intervention. Data was collected by an observer who made a hash mark every time a student or the teacher performed a target behavior. Target behaviors for the students included: talk outs (talking without permission, talking outside of a discussion, etc.), out of seat (getting out of seat without permission), and disrespectful behaviors (verbal or physical aggression

towards peers). A reinforcer (prize) was chosen by students by popular vote. They would earn the reinforcer through a lack of negative behaviors during the GBG.

During baseline, the teacher went through the day as if it were any other day. Data was recorded, noting teacher and student variables. The teacher was then trained over a one-week period on the GBG. Training sessions went on until the teacher could follow the GBG script perfectly, reaching 100% integrity. The teacher was also trained in what to do if the procedure was interrupted; the teacher script in the GBG manual would be followed to keep the integrity. Accuracy and consistency were the focus of the training.

Along with the data collected throughout the baseline and intervention phases, a survey was created for the teacher using the Intervention Rating Profile-15 (IRP-15); it consisted of 11 items and used the Likert scale for responses. The higher the score, the more positive experience for the teacher. Students were also provided a survey which used the Children's Intervention Rating Profile (CIRP) and a Likert scale of seven items.

In the baseline phase, the teachers' rate of praise statements varied while her rate of disapproval statements was on an incline. Once the GBG was utilized, praise statements increased and reprimands decreased. Students during baseline showed an elevated level of talking out, though their out of seat and disrespectful behavior levels were of varying degrees. After GBG was introduced to the classroom, student behaviors decreased across the board.

The responses to the surveys were positive with both the teacher and the students, although the teacher mentioned time being a possible issue when research-based practices were introduced in an educational setting. The researchers concluded that the GBG creates positive improvements on student behaviors in the classroom. There was a noticeable increase

in the teacher's behavior-specific statements towards students, although in this study these statements may have occurred due to the way the GBG was set up to encourage the teacher to notice appropriate behaviors in the students.

One notable limitation in this study would be that the study took place in one classroom only. A multiple baseline design would help in generalizing the research. Another limitation is that some of the unprompted appropriate behaviors were not monitored as the teacher was instructing the class, which left them unseen.

Research on the GBG continues to support the inference that it is an effective intervention tool for teachers to keep control of their classrooms. It is a relatively low maintenance technique to introduce into an educational setting. Teacher behavior appears to benefit from the GBG and as students receive more behavior-specific praise, their success and performance in the classroom seems to increase as well.

## Choice-Making

Table 4

### Choice-Making Table

Author(s)	Study Design	Participants	Procedures	Findings
Skerbez, M.D., & Kostewicz, D.E. (2015)	Study	Four, fifth-grade students with ED or a DSM-IV behavior diagnosis in an elementary charter school in a large urban city in Northeast United States. The study occurred in a fifth-grade general education classroom of 23 students who sat in groups of four or five. Implementation occurred daily during an independent math review activity. Single-subject multi-element experimental design.	The study investigated the intervention of choice for students with E/ED in inclusive settings.	Choice-making as an intervention lead to decreases in students' problem behaviors and increases in task engagement and academic performance. Students remained engaged longer on more difficult material.
Gable, R. A., Tonelson, S.W., Sheth, M., Wilson, C., Park, K.L. (2012)	Qualitative	All public schools in the state were asked to participate. The survey was given to five general education teacher who taught students with an emotional disability (ED) in each building, along with all special education teachers who taught students with ED.	They developed a survey to determine respondent perceptions regarding current evidence-based practices for students with ED.	For 15 of the 20 evidence-based practices, at least 80% of special education teachers chose 'important' or 'very important', while their general education counterparts chose 11 or 55% of the practices as being 'important' or 'very important'. The findings show teachers lack preparation to work effectively with students with ED.
Jolivette, K., Wehby, J.H., Canale, J., Massey, G. (2001)	Qualitative	Three elementary-aged, male students diagnosed as having an emotional disturbance, and attended the same classroom. They were between the ages of six and ten-years old. They were in a self-contained special education classroom. -Multiple-baseline, across students, single-subject design.	The special education teacher implemented the intervention of choice-making opportunities on student task related and social behaviors during math period. Compared effects of choice and no-choice conditions.	Do multiple choice-making opportunities during math result in positive changes in the task-related and social behaviors of the students with EBD?  The results suggest that providing opportunities to make choices can positively influence the behavior of some students with EBD, specifically increased levels of appropriate behaviors.

The study by Skerbetz and Kostewicz (2015) researched students who have been diagnosed with emotional disturbance (ED) are being included in General Education classrooms, although not as much as some people would like. There are mixed opinions on whether including them in these classrooms is beneficial to them or not. Including them in General Education classrooms can sometimes prove to be difficult for everyone involved, depending on the level of training and comfort of the teacher and student and which interventions have been put in place to prevent behavioral challenges in the classroom. Teachers in General Education classrooms often seek out the least time consuming and most effective types of interventions, and choice-making has shown evidence of being beneficial in both areas.

Choice-making offers students the ability to choose outcomes for themselves in the classroom, whether it be choosing assignments or materials for tasks or selecting their own academic goals. Research in the past 22 years suggests that the implementation of choice-making interventions for students with ED has an overall positive effect on their social and academic behaviors. The researchers in this study hope to report findings on whether using choice-making interventions on students with ED in inclusive settings will result in more on-task behaviors and enhance academic performance.

Participants in this study were four fifth grade students with ED or a Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV behavioral diagnosis. These students attended a charter school in an urban area and were nominated by their Special Education teacher for having histories of being off-task and having assistance with behavior support plans.



This research study used a single-subject multi-element experimental design. The researcher began by administering math pretests to the participants which were used to determine each student's math level. Students were then provided sheets of paper with images that depicted the reinforcement items which included items such as bracelets, pencil toppers, pens, or certificates for free passes from wearing uniforms, etc. The researcher used the top five favorite items amongst the participants and randomized them for handing out. During math class, participants received their assignments, which were separate from the other students' in their inclusion classroom, and a cue card that explained the day's condition. Under baseline conditions, students received no choice and no reinforcement so they went through their day as usual. The researcher monitored their engagement over 8 total days during baseline to get an understanding of their behaviors and create consistencies in the research. After baseline, students participated in one of three conditions: (a) no choice, no reinforcement, as described above, (b) no choice of reinforcement, where students were given one of the top five reinforcers at random, and (c) choice of reinforcement, where students chose for themselves one of the reinforcers.

At the same time as conditions were being rotated, students entered different phases in which the researcher would provide them increasingly difficult math assignments based on their independent math level and their instructional math level. Phase 1 was focused on their independent while Phase 2 focused on their instructional math level. The participants and their Special Education teacher also received social validity surveys.

The results of this study were mixed in that it was somewhat difficult to distinguish between conditions, as the students seemed to offer the same amounts of engagement

throughout each condition. Their levels of engagement were altogether high, although it remained that way with or without the presence of reinforcers. There was an increase in engagement between Phase 1 and Phase 2 with the presence of reinforcers, but without rewards, the engagement was not as strong. According to the results of the surveys provided, the students responded positively to being able to choose their rewards. They disagreed with the suggestion that they were not motivated by choices and rewards. The teacher reported positive feedback as well, stating that she felt consequence choice was highly effective and she was very likely to want to implement it in her classroom, however she reported it was not likely she would have the time.

The limitations in this study begin with the power of the reinforcers. The researcher was limited in his choice for rewards, so it is possible provided the opportunity to widen the options the students may have reacted with more enthusiasm. Another limitation is that the students' preferences showed signs of changing throughout the study and it may have helped to allow them to choose their top five choices in reinforcer at least one more time as research continued. The final limitation is that, for ease of the study and because of permissions needed, the researcher had to sit the students in one group so that they were close enough to record on video all at once. Typically, students with these behaviors should be scattered throughout the classroom to neutralize some of their tendencies, but because they were all together it may have been distracting and limited their engagement in some ways.

This study supports past evidence that consequence choice can be a beneficial and efficient intervention for the classroom, however it might be best to keep the level of assignments to the needs of the student.

The research of Jolivette, Wehby, Canale, and Massey (2001) focused on Nashville Metropolitan School District difficulties and how they present themselves on a daily basis in the educational lives of students with emotional or behavioral disorders (EBD). These students often require modified assignments which are not always provided for them, and the behavioral challenges they present in the classroom are sometimes not addressed effectively by their teachers, leading to a lack in the educational and academic experience. Choice-making opportunities is an intervention that has been utilized in classrooms to take some of the pressure off of teachers by giving the students a range of options in their tasks, materials, and interactions in order to motivate and enhance their performance behaviorally, academically, and socially.

Choice-making provides the student with the ability to more or less design or customize a portion of their learning experience by giving them the opportunity to choose the option that they think best suits them. The teacher benefits from choice-making by achieving the same initial academic or social goal for the student without being met with behavioral challenges that can sometimes come with a teacher-controlled (No Choice) environment. The researchers in this study will be collecting supporting evidence of the benefits of choice-making in students with EBD and explore the suitability for the teachers in implementing this intervention in their classrooms.

The participants in this study are three male students with EBD from the same Special Education classroom who performed 1 to 2 years below their grade level in math. These students each had histories of presenting negative social and behavioral challenges and

struggled with staying on-task. The researchers collected the previous academic and behavioral data from the student's' records prior to the study.

The observers used video cameras to record sessions and collect data during the student's' typical math period. They also took notes each day on any unusual occurrences such as tardiness which may affect the student's' behavior in certain ways. For treatment fidelity, they would only record data that precisely followed the procedure laid out for the teacher before the study began. They used a six-step method in presenting the choice-making opportunities:

- 1) Offer the individual to or more options
- 2) Ask the individual to make a choice
- 3) Provide wait time for student to make his or her choice
- 4) Wait for the individual's' response
- 5) Reinforce with the option chosen
- 6) If the individual does not make a choice, prompt the individual to choose from the provided options

One of the reasons behind the study taking place during a math period in which the students would work on math assignments independently was due to the fact that the three participants with EBD tended to have behavioral issues during math periods, which could affect their ability to retain the information, lending to the challenges they seem to be suffering in the subject. Before the study began, the teacher and researchers agreed on math assignments that fit each student's' needs academically. Each assignment was of equal length and difficulty, and considered the daily academic goals of the teacher, the required

curriculum, the individualized education program (IEP) for each student in math, and their level of achievement.

The study used a multiple-baseline, across-students design with a withdrawal-of-treatment period of No Choice. The teacher was trained on how to present the assignments to the students. During the Choice period, the teacher laid out three math worksheets for each student individually and informed each student that they would need to be completed that day. The teacher then read the directions of each worksheet and asked the student which worksheet they would prefer to work on first using the six-step method mentioned above. This continued until the worksheets were completed. During the No Choice period, the assignments were presented to each student individually in the same way, only the teacher told the student which worksheet to work on first, then second, and so on. The Choice period was reintroduced after the No Choice session completed.

Along with the study, the Special Education teacher was given a Treatment Acceptability Rating Form-Revised (TARF-R; Reimers & Wacker, 1988) for each student to survey the teacher willingness to implement the choice-making strategy in the classroom. It also collected information on the teacher expectations on the choice-making intervention's effectiveness as well as any disadvantages the teacher saw in the implementation. She was given these questionnaires during the last day of the No Choice condition and the second to last day of the second round of the Choice condition.

Results of this study supports previous evidence that the choice-making intervention can be successful for students with EBD. Two out of the three students had a positive response to the choice-making and were engaged with their work, while the third was

somewhat variable throughout the study. Their behaviors during the No Choice period were more off-task and behaviors were more disruptive. The highest increase in appropriate behaviors and engagement seemed to be within the second implementation of the Choice condition. Overall, the teacher expressed a willingness to introduce this intervention into her classroom, although her thoughts on one of the students were that it was not as effective for him as the others.

There are a few limitations in this study that are worth noting. First, the study took place in one classroom, not allowing for a very generalized study as this took from one classroom environment. Another limitation is that the researchers produced more results after the No Choice condition and the reinstatement of the choice-making and it is unclear if that trend would continue were they able to set up another round of No Choice and Choice conditions. The third limitation is that, although the Special Education teacher and the researchers tried to create the most equal ground between the worksheets, there was some lack in equivalencies.

This study further supports the ones before it in the effectiveness of choice-making when implemented in students with EBD. While more research is certainly necessary before any conclusions can be drawn, there were upwards trends in the students' behaviors and engagement in their assignments when they were given the choice between assignments. Perhaps if more choices were implemented in classrooms with students with EBD, the academic successes would soon be apparent.

### **Chapter III: Conclusions and Recommendations**

The purpose of this research paper was to review evidence-based interventions for elementary students with emotional or behavioral disorders. Chapter I provided background information on the topic, and Chapter II presented a review of the research literature. In this chapter, I will discuss findings, recommendations, and implications from research findings.

#### **Conclusions**

I reviewed 13 studies that examined evidence-based interventions for elementary students with emotional or behavioral disorders. One of the studies researched twenty different evidence-based interventions for students with emotional disability (ED) students (Gable et al., 2012). Three of the studies researched peer-assisted learning or peer learning (Garwood et al., 2014; Ryan, Pierce, & Mooney, 2008; Wehby et al., 2003). Four studies researched self-monitoring (Blood et al., 2011; Carter et al., 2011; Denune et al., 2015; Gulchak, 2008; Wills et al., 2016), three studies researched positive reinforcement or praise (Allday et al., 2012; Elswick & Casey, 2011; Sutherland et al., 2000), and two studies researched choice making (Jolivet et al., 2001; Skerbetz, & Kostewicz, 2015).

Of the 13 studies reviewed, three of the studies examined the effectiveness of *Peer-Assisted Learning or Peer Learning* as an evidence-based intervention for students with EBD. Most of the research on interventions in the study by Garwood et al. (2014) deals with producing results in student behavior, not necessarily academic achievement. I chose this study to add to my research even though it did not have elementary students included in it because I wanted to add some early secondary research, because often elementary schools have sixth grade students which could also be included in elementary research. According to

Ryan, Reid, and Epstein (2004), peer-mediation is one intervention that looks promising for assisting students and helping to enhance their academic performance. The results supported a positive correlation between peer-mediated interventions and academic performance, as well as positive feedback from teachers who tried the interventions. In the Ryan, Pierce, and Mooney (2008) study there was a recorded positive academic outcome on all peer mediated intervention types used in the studies. However, there were inconsistencies in reporting the characteristics of the participants. The implications of this study were that even though the peer mediated interventions were found to be effective, it was noted that different types were investigated and there was insufficient data for any single intervention to help reach a firm conclusion. The last study on peer-assisted learning or peer learning was by Wehby et al. (2003). Researchers of this study adhere to a hypothesis that if a combination of reading intervention strategies, namely modified versions of the *Open Court Reading* curriculum and *Peer-Assisted Learning Strategies* (PALS), are implemented, then the reading achievement gains will improve for students with EBD. Results revealed that the combined reading intervention strategies were only moderately effective in improving some of the students' academic performances which varied on a week-to-week basis.

*Self-Monitoring.* This intervention tool for behavior changes, in which students record their own behavior and compare what they recorded to a predetermined goal. In Carter et al. (2011), it was found that self-management strategies including self-monitoring, self-reinforcement, and self-evaluation can be readily taught to and easily acquired by the students. The skills learned in these interventions could be used in multiple settings to improve academic outcomes as well as socio-behavioral outcomes. Self-monitoring with a



handheld device in the study by Gulchak (2008), has also shown positive results. It would do well to note the results of this particular study in the use of mobile computing for self-monitoring, as they demonstrate the intervention's effectiveness with students with EBD. Positive results occurred for on-task behavior for the student studied with the handheld device, however it does not mean this student is going to academically excel due to his increased on-task behavior. Results of this study by Blood et al. (2011) suggest that a positive outcome can be produced with the implementation of video modeling and self-monitoring, and the use of an iPod Touch makes the implementation easier for the teacher. These results support using video modeling and self-monitoring as a way to manage a student with EBD can increase the success of the student and improve the behaviors that are performed in the classroom. Denune et al.(2015) also studied self-monitoring in the study title: *Combining Self-Monitoring and an Interdependent Group Contingency to Improve the Behavior of Sixth Graders with EBD*. The study is aimed at investigating to what extent the inclusion of self-monitoring increases the effectiveness of interdependent group contingency intervention. The study also expands the literature on interdependent group contingency intervention effects as well as self-monitoring procedures on students with EBD. The self-monitoring intervention in this study was found to be effective over a long period of time, as it led to decreased disruptive behavior and increased on-task behavior among students with EBD. In the last study by Wills et al. (2016) students were given an intervention to help reduce the disruptive behavior and increase on-task behavior. This self-monitoring intervention team within the classroom is called the Class-Wide Function-Related Intervention Teams (CW-FIT). Based on the results analysis, it can be concluded that the CW-FIT intervention reduced disruption and

increases on-task behavior over time in EBD students. This study is the demonstrated how CW-FIT is an effective intervention tool for reducing disruptive behaviors and increasing on-task behaviors in an elementary classroom for students with EBD risks.

*Positive Reinforcement/Praise.* Three studies used positive reinforcement or praise for an intervention with EBD elementary students. The first study written by Allday et al.(2012) contributes to other research that an increase in the Behavior-Specific Praise (BSP) rate for students with or at risk for EBD can help to cultivate on-task behaviors. This study affirms that offering students praise in the form of a statement which explains which acceptable behavior they are being praised for can enhance the student's ability to remain on task and engaged in classroom activities and discussions. This study contributes to other research that an increase in the BSP rate for students with or at risk for EBD can help to cultivate on-task behaviors. According to the study by Sutherland et al. (2000), teacher praise has proved to be one of these more efficient interventions. The researchers concluded that not only would students with EBD benefit from a higher rate of behavior-specific praise, but their teachers would also benefit from gaining knowledge on the advantages of using behavior-specific praise as a simplistic form of classroom management. The findings reported in this study support the utilization of teacher praise and behavior-specific praise as a strategy to maintain a high level of success in students with EBD. Elswick and Casey (2011) mentioned in their study that teachers have noted that they prefer not to take too much time out of class to address the issues, so research is always looking for more efficient techniques that are not as time consuming. The Good Behavior Game (GBG) seems to be the favorite in these studies, according to Elswick and Casey (2011). The researchers concluded that the GBG creates

positive improvements on student behaviors in the classroom. There was a noticeable increase in the teacher's behavior-specific statements towards students, although in this study these statements may have occurred due to the way the GBG was set up to encourage the teacher to notice appropriate behaviors in the students. Teacher behavior appears to benefit from the GBG and as students receive more behavior-specific praise, their success and performance in the classroom seems to increase as well.

*Choice-Making.* The first study reviewed about choice-making was by Skerbetz, and Kostewicz (2015). It reviewed choice-making offers students the ability to choose outcomes for themselves in the classroom, whether it be choosing assignments or materials for tasks or selecting their own academic goals. The study mentioned research in the past 22 years suggests that the implementation of choice-making interventions for students with ED has an overall positive effect on their social and academic behaviors. This study supports past evidence that consequence choice can be a beneficial and efficient intervention for the classroom. The teachers reported positive feedback in regards to choice-making as well, stating they felt consequence choice was highly effective and was very likely to want to implement it in the classroom, however it was reported it was not likely they would have the time to effectively incorporate this intervention (Jolivet et al. (2001). Results of this study supports evidence that the choice-making intervention can be successful for students with EBD. Two out of the three students had a positive response to the choice-making and were engaged with their work, while the third was somewhat variable throughout the study. Their behaviors during the no choice period were more off-task and behaviors were more

disruptive. This study further supports the ones before it in the effectiveness of choice-making when implemented in students with EBD.

### **Recommendations for Future Research**

All 13 studies had general limitations. The three studies involving peer-assisted learning or peer learning had limitations that included studies with extremely narrow target area of criteria for finding the research articles, with some studies excluded due to the inability for researchers to focus on students with EBD only. The goals were incredibly specific, but it is difficult to generalize the results with so few variables. Effect size was also difficult to distinguish with so few studies presented. The researchers would have had greater success if there were less variables or more studies which focused on the specifics of their research. The limitation of the second study was based on the conservative criteria used in the inclusion process. Many of informative articles were left out on the basis of not being able to distinguish results for students with EBD and other disabilities. Therefore, findings from a small number of studies provides challenges to generalize the results for all EBD students. Limitations to the last study include the relatively short time period in which the test was administered; a reliance on visual observation alone as a measure to determine changes in social behavior of the participants; and a lack of appropriate generalization measures in reading.

Four studies researched self-monitoring with limitations as well. Due to the broadness of the first study by Carter et al. (2011), it would be important to note that the findings cannot be relied when dealing with a single group of students with EBD. The limitation of the study can be attributed to the addressing of narrow range of self-determination interventions also

various gaps of knowledge were identified in the used studies. In the second study by Gulchak (2008), the limitation is that on-task behavior was manipulated in various ways either by the teacher, the paraprofessionals in the classroom, the student's motivation, and distractions amongst his peers. Another limitation is the study focused solely on the on-task behaviors of the student, which does not necessarily mean the student will excel academically. The study by Blood et al. (2011), limitations include only one student being involved in the study. Overall, it would be beneficial to do further research with multiple students in order to produce more generalized results. Secondly, being that video modeling and self-monitoring were introduced in this study at the same time, it is difficult to discern whether self-monitoring alone would have had a favorable outcome on the student's' behavior. The final limitation is that the videos provided for the student were created by the researchers and not the student, making it hard to determine whether this type of intervention is suitable for teachers to try in their classrooms. Denune et al. (2015) is the third study for self-monitoring and the limitations of the this study were based on the fact that there was no inclusion of testing the effect of self-monitoring interventions on its own and be able to ascertain its effectiveness in the same manner. The combination of self-monitoring intervention with another procedure and evaluating it based on the outcome was a drawback in the study. Wills et al. (2016). The limitation of the study was based on the several components of CW-FIT which the study did not identify which were most effective ones.

Limitations in the study by Allday et al. (2012), for positive reinforcement/praise, suggest that it would prove useful to further research. The first limitation noted is that the teacher participants may feel inclined to perform better in the presence of an observer and not

necessarily produce the same result if they were not in an official session. Another limitation is that the researchers were unable to collect maintenance data when the program concluded and the third limitation is that two of the students were rather inconsistent in their results, and in spite of showing an increase in their on-task behavior on average. The fourth and final noted limitation is that students were sometimes observed during activities that they enjoyed, which would have an impact on their engagement. The study by Sutherland et al. (2000) shows there are a few limitations apparent in this study. One of these limitations is that, while the rate of BSPSs increased between the baseline and intervention phases of the observations, as did the rate of non-behavior-specific praise, making it difficult to ascertain whether the on-task behavior was entirely related to the level of behavior-specific praise. Secondly, the low number of observations allows for doubt on the accuracy of the amount of teacher praise and students on-task. The study is also limited greatly by its use of one single classroom within a small timeframe, which is not a significant enough sample to form a general conclusion. The study by Elswick, and Casey (2011), one notable limitation in this study would be that the study took place in one classroom only. A multiple baseline design would help in generalizing the research. Another limitation is that some of the unprompted appropriate behaviors were not monitored as the teacher was instructing the class, which left them unseen.

Looking at the limitations for the two studies for choice-making starting with the study by Skerbetz and Kostewicz (2015). The limitations in this study begin with the power of the reinforcers. The researcher was limited in his choice for rewards, so it is possible provided the opportunity to widen the options the students may have reacted with more enthusiasm. Another limitation is that the students' preferences showed signs of changing throughout the

study and it may have helped to allow them to choose their top five choices in reinforcer at least one more time as research continued. The final limitation is that, for ease of the study and because of permissions needed, the researcher had to sit the students in one group so that they were close enough to record on video all at once. Typically, students with these behaviors should be scattered throughout the classroom to neutralize some of their tendencies, but because they were all together it may have been distracting and limited their engagement in some ways. In the Jolivette et al. (2001) study there are a few limitations that are worth noting. First, the study took place in one classroom, not allowing for a very generalized study as this took from one classroom environment. Another limitation is that the researchers produced more results after the no choice condition and the reinstatement of the choice-making and it is unclear if that trend would continue were they able to set up another round of no choice and choice conditions. The third limitation is that, although the special education teacher and the researchers tried to create the most equal ground between the worksheets, there was some lack in equivalencies.

### **Implications for Current Practice**

As an educator of students with Emotional or Behavioral Disabilities, it is part of my profession to meet the needs of the students I case manage. I am often looking for interventions I could implement with my students to provide motivation. The studies I concentrated on for research are interventions I could use every day or provide to other teachers to use without any significant training. My research question that guided my review of literature is: What evidence-based interventions can be used successfully for elementary school students with Emotional or Behavioral Disorders?

During the course of learning more about peer-assisted learning or peer learning, self-monitoring, positive reinforcement or praise, and choice making; I learned more about the importance of using interventions with students who are identified EBD to improve their behavior. Many times, as an educator we are focused on the behavioral ‘problems’ of our students and we sometimes lose focus on being more proactive with using interventions for elementary students with EBD. My goal as an EBD teacher is to decrease undesirable behavior and increase desired behavior to increase academic improvement. Although these interventions may seem common for EBD teachers to use, I have found while working with many other special education teachers, these interventions are not commonly used. I researched these interventions to learn more about them myself and to share my learned knowledge with other educators. It only seems right to propose other teachers to use these interventions when working with elementary students with EBD.

### **Summary**

The findings of these studies concluded there are variables that affected the outcomes of the studies and the findings should be taken into consideration when implementing the evidence-based interventions included in them. I have been teaching for six years and I have learned many different curriculums, ideas, and interventions for students with EBD. There seems to be a lack of research on interventions that exist to specifically for EBD students in elementary school. As a teacher working with students with EBD, I am hopeful there will be more research on evidence-based interventions for elementary students.



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