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Examining the Effects of a Peer-Mediated Social Skills Intervention on the Prosocial
Behaviors of Elementary Students with Emotional and Behavioral Disorders

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by

Prabhjot Singh

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EXAMINING THE EFFECTS OF A PEER-MEDIATED SOCIAL SKILLS
INTERVENTION ON THE PROSOCIAL BEHAVIORS OF ELEMENTARY
STUDENTS WITH EMOTIONAL AND BEHAVIORAL DISORDERS

by

Prabhjot Singh

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ABSTRACT

EXAMINING THE EFFECTS OF A PEER-MEDIATED SOCIAL SKILLS
INTERVENTION ON THE PROSOCIAL BEHAVIORS OF ELEMENTARY
STUDENTS WITH EMOTIONAL AND BEHAVIORAL DISORDERS

By Prabhjot Singh

Students with Emotional and Behavioral Disorders represent part of the population of students who receive special education services, and the social skill deficits that they present makes it so that they are less likely to pass their classes and more likely to drop out of school than their typical peers. The social skill deficits of these students often lead to a variety of negative factors including poor relationships and academic achievement. The purpose of this study was to examine the effects of a peer-mediated social skills intervention on fourth and fifth grade students in a public-school setting. The current study explicitly taught students the target social skills of sharing, compliment giving, and sportsmanship using modeling, role-play, and discussion with feedback. Results of the study indicated participants increased target skills in intervention phases with the skill of sharing showing strong results for all three participants and sportsmanship skills showing strong results for one participant. Target skills declined somewhat in maintenance phases for all participants but remained above baseline levels. Two participants generalized the skill of sharing to the recess setting with untrained peers, while the third participant generalized sportsmanship skills to the recess setting.

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Chapter One: Introduction and Statement of the Problem

Students with emotional and behavioral disorders (EBD) represent about one percent of the population of students who receive special education services, or roughly 344,000 students in the United States (Individual with Disabilities Education Act, 2004). These 344,000 students represent a very unique niche in special education. While often cognitively and physically capable to do well and even excel in the general curriculum, these students regularly engage in behaviors that are detrimental to their academic and social life. Students with EBD are less likely to pass their classes and more likely to drop out of school than their typical peers (Wagner & Cameto, 2004). After high school, students with EBD generally have difficulty with employment and many have trouble with substance abuse (Bullis & Yovanoff, 2006; Walker, Ramsey, & Gresham, 2004). Damaging verbal and physical behaviors displayed by students with EBD are key reasons that make succeeding in academia and creating relationships with peers and adults unlikely (Cullinan & Sabornie 2004; Gresham, Cook, Crews, Kern, & 2004; Landrum, Tankersley, & Kauffman, 2003; Walker et al., 2004).

For many students with EBD, appropriate teacher and peer interaction is challenging. Their social skill deficits lead to a variety of negative factors including peer rejection, low academic achievement, and negative interactions with teachers (Gresham et al., 2010; Lane, Barton-Arwood, Nelson, & Wehby, 2008; Mikami, Huang-Pollock, Pfiffner, McBurnett, & Hangai, 2007). The use of social skills is necessary for transition to a post-secondary environment and adult life success (Cumming et al., 2008; Farrington et al., 2012; Herbert-Myers, Guttentag, Swank, Smith, & Landry, 2006; Konold, Jamison,

Stanton-Chapman, & Rimm-Kaufman, 2010; Segrin & Taylor, 2007), however, due to their social inadequacies, students with EBD often experience social isolation, high drop-out rates, and other difficulties such as juvenile delinquency (Cartledge & Milburn, 1995).

Research has shown that when explicitly taught social skills, students with EBD can reduce negative behaviors such as disruptions (Kamps, Kravits, Stolze, & Swaggart, 1999), inappropriate language, and teasing (McDaniel, Bruhn, & Troughton, 2017), and can increase prosocial behaviors such as improved cooperation, participation, and patience (Chen & Bullock, 2004). These studies suggest that social skills instruction is beneficial and does assist in improving the social competence of students with EBD. However, due to the overall lack of studies in this field, more research is needed (Anderson, Trinh, Caldarella, Hansen, & Richardson, 2018; Moore, Cartledge, & Heckaman, 1995).

One specific type of intervention that has been found to improve social skills in students with EBD is peer-mediated interventions (Kohler et al., 1995; Lee & Odom, 1996). Peer mediated interventions incorporate typical peers in interventions as positive models, or as the individuals who deliver the intervention (Ryan, Reid, & Epstein, 2004). Peer-mediated interventions have been found to improve participants' ability to follow directions, engage in on-task behaviors, and demonstrate cooperation (Robinson-Ervon, Cartledge, Musti-Rao, Gibson Jr., & Keyes, 2016; Wu, Lo, Feng, & Lo, 2010). Including typical peers in social skills interventions with students with EBD is important because students with EBD need to be able to interact with all peers, including peers from general

education classrooms. Including peers in the intervention as peer models means students can transfer skills taught by adults directly to their peers.

Students diagnosed with EBD are often placed in special day classrooms and may only interact with general education peers during recess and lunch times. Including typical peers in social skills interventions has shown to be effective in the acquisition of prosocial skills, such as cooperating, sharing, and helping, for students with EBD (Nelson, Smith, & Colvin, 1995; Presley & Hughes, 2000; Wu et al., 2010), however, more research is needed, as the research area of social skills for students with EBD is greatly lacking (Anderson et al., 2018; Moore et al., 1995). In addition, more studies are needed which examine the effect of peer-mediated interventions with elementary aged students with EBD.

Purpose of the Study

The purpose of the present study was to measure the effect of a peer-mediated social skills training on third, fourth, and fifth grade students aged 9, 10, and 11 with EBD. The current study proposed to explicitly teach students the target social skills of sharing, complimenting, and sportsmanship. Research suggests skills such as sharing are important interpersonal skills (McDaniel et al., 2017) and that giving compliments increases a person's likeability and chances of creating healthy relationships (Knapp, Hopper, & Bell, 1984). A number of studies have explored the importance of sportsmanship in the larger set of social skills (Samalot & Poretta, 2013), and curriculums such as Appropriate Sport and Game Behaviors (Moore et al., 1995) have been developed to address this need. Through effective social skills instruction, the

expected outcomes of this study included an immediate increase in instances of sharing, compliments, and displays of sportsmanship.

The study followed a multiple baseline across behaviors research design allowing for comparison of data on the dependent variables across baseline and intervention phases. The intervention in this study was adapted from Skillstreaming for the Elementary School Child (McGinnis & Goldstein, 1997), and used role-playing, dialogue, and practice with the participants to increase frequency of compliment giving, sharing, and sportsmanship behaviors across all participants. The intervention took place in a classroom with the researchers, students with EBD, and peer-models that were chosen to participate from the general education classes. These peer models served as examples for the students with EBD through baseline and intervention phases of the study. The intervention sessions were immediately followed by nine minutes of game play, where students played basketball, and one minute of wrap-up. Researchers collected data to check for the occurrence of compliments, sharing, and sportsmanship.

Background and Need

Social skills deficits are detrimental to the academic and behavioral success of students with EBD (Kauffman & Landrum, 2009). The lack of social competence is a critical deficit area that impacts students with EBD across domains. During school, challenging behaviors, both verbal and physical, can disrupt the ability of students with EBD to engage with and develop meaningful peer and adult relationships (Cullinan & Sabornie, 2004; Gresham et al., 2004). Furthermore, students with EBD often have significant academic difficulties (Lane et al., 2008) and low overall social competence

(Lane, Carter, Peirson, & Glaeser, 2006). With new state standards that promote social emotional learning for all students it is more important than ever for teachers to address these areas.

Challenges for Students with EBD

Students with EBD face many challenges in the classroom related to social skills, and lack of social competence is one of the primary factors that impede the learning of, or contribute to the impediment of learning for students with EBD (Bullock & Gable, 2006; Wagner et al., 2006). Often the most destructive social behaviors come from a lack of emotional regulation as well as the inability of students with EBD to create and maintain healthy relationships (Cullinan & Sabornie, 2004). The negative impact of these obstacles extends well into adult life (Walker et al., 2004).

To begin with, students with EBD often display emotional regulation difficulties, and behavioral problems such as verbal and physical aggression (Cullinan & Sabornie, 2004; Gresham et al., 2004; Landrum et al., 2003; Walker, Irvin, Noell, & Singer, 1992). These behavioral problems can result in office referrals and eventually, academic losses due to lost instructional time. These occurrences can have a snowball effect, leading to more extreme behaviors, and ultimately, a change in educational placement. Behavior problems prove to be exceedingly damaging when displayed in educational settings, as they negatively impact not only academics, but also the social and emotional well-being of the student (Wagner & Cameto, 2004).

In addition, students with EBD display fewer prosocial behaviors than their peers. Their ability to negotiate social exchanges suffers greatly when compared to their peers

without disabilities. Rinaldi, Kates, and Welton (2008) attempted to measure the social competence of students with EBD through teacher rating scales and competitive tasks with general education peers. Participants in this study completed three tasks to evaluate their reactions when faced with cooperative versus competitive tasks. The cooperative task required the participants to work together to make a model of K'Nex pieces, whereas the competitive task, encouraged participants to outperform opposing teams in speed of building a model. Results of this study indicated that participants with EBD were less prosocial than participants without EBD. In the competitive task, students with EBD averaged 10.72 prosocial behaviors such as cooperation, sharing, and helping per activity compared to 16.91 for the participants without EBD. In cooperative tasks, participants with EBD displayed 22.28 prosocial behaviors compared to 30.82 for students without EBD. The results of this study suggest that no matter what type of task, students with EBD continue to display fewer prosocial behaviors than their peers without disabilities.

Research also suggests that students with EBD not only differ from typically-developing students but they differ from students with other disabilities. For example, in a study conducted by Lane, Carter, Pierson, and Glaeser (2006), researchers examined academic and social-emotional assessment results for students with EBD and learning disabilities (LD). The teachers of the participants filled out the Social Skills Rating System– Secondary Version (SSRS), (Gresham & Elliott, 1990) and the Walker-McConnell Scale of Social Competence and School Adjustment (SCSA), (Walker & McConnell, 1995) which measured social, academic, and behavioral characteristics of the participants with both disabilities. Researchers also reviewed school archival records,

including the cumulative folders for each participant. An analysis of assessment results indicated participants with EBD had significantly lower levels of social competence and higher rates of problem behaviors compared to their peers with LD. Furthermore, participants with EBD were noted to have more negative comments in their cumulative folders than their peers with LD. Overall these results suggest that when compared to students with learning disabilities (LD), students with EBD displayed lower levels of social competence.

Clearly students with EBD have deficits in social competence making it difficult for these students to be successful in the school setting, and evidence suggests their social skills are different than both typical peers and peers with disabilities. Students with EBD averaged more negative behaviors across a variety of different tasks compared to their typical peers (Rinaldi, Kates, & Welton, 2008). In addition, students with EBD displayed lower levels of social competence and higher rates of problem behaviors as compared to typical peers and peers with LD (Lane et al., 2006). Thus, social skills trainings and interventions are needed to alleviate the social difficulties that these students face.

Social Skills Interventions in the Literature

To address the social challenges often displayed by students with EBD, (Cullinan & Sabornie, 2004; Dumas, Neese, Prinz, & Blechman, 1996; Gresham et al., 2004; Landrum et al., 2003; Rinaldi, 2002; Walker et al., 2004), social skills trainings are needed. Currently, specific interventions that include role-playing, team-building activities, and journaling have shown signs of being effective for reducing social skill deficits in students with EBD (Gresham et al., 2004). These interventions focus on a

variety of target skills in order to improve the overall social competence of students with EBD.

Social skills interventions have generally shown to reduce problem behaviors and increase prosocial behaviors in students with EBD. The WhyTry Social Skills Program (Moore, 2008) is one such social skills program that Wilhite and Bullock (2012) implemented with 15 participants with EBD. The program used journal activities, music, and visual analogies to deliver instruction. After delivering instruction for five weeks, researchers noted reductions in office referrals and problem behaviors such as disruptions, inappropriate language, and fighting across all participants. Furthermore, participants were displaying more prosocial behaviors in the classroom. The study further indicated that participants felt that this program benefited them by teaching them skills such as how to express themselves and how to be a leader. The teachers also reported that the program helped the students learn how to take turns and how to work as a team. While these results are promising future research should include larger sample sizes, longer follow-up periods, and control groups, as these were limitations of the study.

In another examination of a social skills intervention, Chen and Bullock (2004) implemented an intervention that used the strategies of literature, telecommunications, and activities such as skits, songs, and crafts, to make an interactive intervention. Participants read stories that had different themes such as sacrifice, and good versus evil then were given the opportunity to use online characters to come up with dialogue, and interact with each other virtually. This provided participants with a chance to interact positively and build self-esteem. Results of this study noted social competence increases

for all participants, with improvements in cooperation, participation, and patience. Furthermore, negative behaviors such as arguments decreased and teachers reported increased prosocial skills. Results of this study showed largely positive effects, though the study was limited by small sample size, few instructional periods, and the unknown nature of the long-term effects of the intervention.

Overall, the studies in this section suggest that social skills interventions are effective in reducing inappropriate behaviors, disruptions, and fights in students with EBD (Wilhite & Bullock, 2012) and in improving pro-social skills such as cooperation, participation, and patience in students with EBD (Chen & Bullock, 2004). The studies in this section employed strategies such as discussions, role-playing, and written activities but did not include peer models, and did not assess for the use of skills with typical peers, even though it is imperative for students with EBD to use learned social skills with peers. The studies in the next section use peer-mediation as an integral part of their implementation.

Efficacy of Peer-Mediated Interventions

In addition to examining adult delivered interventions, it is important to examine the impact of peer-mediated interventions on students with EBD. Students with EBD need to use social skills with peers and peer mediated interventions provide them with this opportunity, which in turn may lead to improved outcomes for students with EBD. This section will examine peer-mediated interventions for students with EBD.

Robinson-Ervin et al., (2016), conducted one such study, where peer-mediators were trained through discussions and presentations. After they were properly trained, typical

peers mediated the intervention with the participants with EBD. The peer-mediators assisted the participants with EBD during skill practice sessions, and also in discussions about the importance of following directions. This 3-week intervention included learning new skills by reading stories, answering comprehension questions, and watching videos related to the social skill. During the intervention, all participants were given opportunities to display their mastery of learned skills. Furthermore, participants were required to discuss in writing, the difference between compliant and non-compliant behaviors. Results from this study suggest that all participants showed an increase in following adult directions, with an average increase of about 20.6%. While these results are encouraging, further research is needed on the effects of this type of peer-mediated intervention on students with EBD from an elementary school setting as this study only included participants from a middle school setting.

Another PMI study paired the use of peer-mediated interventions with self-management procedures to improve social skills acquisition for students with behavioral disorders (Nelson et al., 1995). These researchers conducted a study with three participants and three peer-mediators from a rural school in Washington where they implemented strategies focused on improving social competence. The intervention had two primary facets. The first was teaching the skill of self-monitoring, and the second was getting the peer-mediators to work effectively with the participants targeted in the intervention. The study aimed to specifically improve the recess behavior of participants, so the intervention trainer focused primarily on explaining recess rules, and providing a rationale for them. Then, the methodology for the self-management portion of the

intervention was explained. Participants were taught to give themselves a rating at the end of recess based on their behavior. The ratings were done by the peer mediator and his partner, who was the participant with EBD. If the rating of the participant was within one point of the peer-mediator, then the participant was awarded all of the points for that recess, and given rewards accordingly. Results of the study indicated that all three participants showed improvements in social skills acquisition, and reduction in negative social behaviors. Moreover, participants were able to generalize their skills to lunch recess further indicating the effectiveness of the intervention. These results reinforce the efficacy of peer-mediated social skills interventions in improving the social competence of participants with EBD; however only two target skills were taught in the intervention and participants were of a young age, at six and seven years old. It is unknown whether the results of this study would generalize to students from upper-elementary school.

Peer-mediated interventions have been effective in improving the skill of following directions in students with EBD (Robinson-Ervin et al., 2016) and in improving students with EBD's ability to monitor their own behavior and engage in appropriate interactions in recess (Nelson et al., 1995). Though peer-mediated social skill interventions have shown to be effective in improving social competence of students with EBD, more research is needed to confirm these findings.

Significance of the Study

While the importance of social skills development is often discussed in the literature (Kauffman & Landrum, 2009), there is little research on treating social skills deficits in students with EBD. There are a relatively small number of studies that address social skill

interventions for students with EBD (Kamps, Leonard, Vernon, Dugan, & Delquadri, 1992; Reddy, 2012) and an even smaller number of studies that address social skills for students in the elementary school setting. Of the existing studies implementing social skills interventions for students in the elementary school setting, there are almost no studies that explore the effect of peer-mediation in increasing the effectiveness of the intervention. Of the studies that do employ peer-mediated strategies, very few have been examined with students from the upper elementary school age. The current study will attempt to fill this gap in the literature and add to the overall body of research.

Research Questions

The proposed study will address the following questions:

1. What is the effect of a social skills intervention on increasing sharing in third through fifth grade students with EBD?

2. What is the effect of a social skills intervention on increasing instances of compliments in third through fifth grade students with EBD?

3. What is the effect of a social skills intervention on increasing displays of sportsmanship in third through fifth grade students with EBD?

4. Were students with EBD able to generalize skills learned in the intervention to a new setting?

Definition of Terms

For the purposes of this study key terms are defined as follows:

1. Emotional Behavioral Disorders: For the purpose of this study, an emotional behavioral disorder is drawn from the IDEA definition of emotional disturbance which

defined as an inability to build or maintain satisfactory interpersonal relationships with peers and/or teachers, an inability to learn which cannot be adequately explained by intellectual, sensory, or health factors, consistent or chronic inappropriate behavior or feelings under normal conditions, displayed pervasive mood of unhappiness or depression, displayed tendency to develop physical symptoms, pains, or unreasonable fears associated with personal or school problems. IDEA (2004). Though IDEA uses the term emotional disturbance, the current consensus in the field is to use the broader and less stigmatizing term of emotional and behavioral disorders (Merrell & Walker, 2004).

2. Social Skills: For the purposes of this study, social skills are defined as a set of competencies that (1) facilitate initiating and maintaining positive social relationships, (2) contribute to peer acceptance and friendship development, (3) result in satisfactory school adjustment, and (4) allow students to cope with and adapt to the demands of the school environment (Gresham, Van, & Cook, 2006).

3. Peer-mediated intervention: For the purposes of this study, a peer-mediated intervention is defined as teaching typically developing peers ways to interact with and help learners with disabilities acquire new behavior, communication, and social skills by increasing social opportunities within natural environments (Wong et al., 2014)

4. Sharing: For the purposes of this study, sharing is defined as, to partake of, use, experience, occupy, or enjoy with others (Merriam-Webster Open Dictionary, 2019).

5. Compliment: For the purposes of this study compliment is defined as an expression of esteem, respect, affection, or admiration (Merriam-Webster Open Dictionary, 2019).

6. Sportsmanship: For the purposes of this study, sportsmanship is defined as conduct (such as fairness, respect for one's opponent, and graciousness in winning or losing) becoming to one participating in a sport (Merriam-Webster Open Dictionary, 2019).

Summary

This chapter reviewed the background and need of the present study of a peer-mediated social skills intervention for students with EBD. A brief review of relevant research was provided along with the research questions that this study will be focusing on. The definition of key terms was provided to give clarity to terms that were important in the study. The next chapter will provide an in-depth review of the research on the obstacles that students with EBD face, the effects of social skills interventions on students with EBD, and finally, the effects of social skills interventions that employ peer-mediated strategies on students with EBD.

Chapter Two: Review of the Literature

Approximately 344,000 children and students in United States schools are identified as having EBD (United States Department of Education, 2010). These students have very specific needs and are inclined to encounter challenges in social exchanges with peers. These challenges manifest in difficulties in social problem-solving techniques, which in turn cause them to be less socially capable than their peers (Dumas et al., 1996; Rinaldi, 2002). The development of social skills plays a key role in social competence. Social skills are defined as skills that allow students to initiate and maintain relationships, as well as contribute to friendship development and peer acceptance (Gresham, Van, & Cook, 2006). These skills allow students to adjust to school satisfactorily and cope with the demands of the school environment (Gresham et al., 2006). Providing social skills instruction for students with EBD is an important step in helping them build relationships (Kamps & Kay, 2002), and navigate the challenges of school life adequately (Gresham et al., 2006).

Before investigating social skills training interventions, it is important to first understand the common social skills deficits associated with EBD. This chapter will review the literature relevant to the present study of a social skills intervention for students with EBD. The first section of this literature review will examine characteristics of students with EBD. The second section of this chapter will review the literature on social skill interventions for students with EBD. This research will identify the strategies central to developing social skills interventions for students with EBD. Such an analysis will help to identify areas which warrant further inquiry and research. The third section of

this chapter will review the literature on peer-mediated social skills interventions for students with EBD. The chapter concludes with a summary of the three sections, as well as a description of the theoretical framework from which this study stems.

Characteristics of Students with EBD

Research indicates that students with EBD face obstacles across their lifespan (Gresham et al., 2004). During school, challenging behaviors, both verbal and physical, can disrupt the ability of students with EBD to engage with and develop meaningful peer and adult relationships (Cullinan & Sabornie, 2004; Landrum et al., 2003; Walker et al., 1992; Walker et al., 2004). These students also experience higher high school drop-out rates and are less likely to pass classes than their typical peers (Wagner & Cameto, 2004). While difficulties often are first identified during school, many individuals with EBD go on to have difficulties with employment, substance abuse, and mental health (Bullis & Yovanoff, 2006; Walker et al., 2004). The studies in this section illustrate the academic and social characteristics of students with EBD.

Academic skills. Lane, Barton-Arwood, Nelson and Wehby (2008) sought to confirm and extend previous research that examined the academic and behavioral characteristics of students with EBD. Forty-two students (34 male, eight female) in self-contained classrooms in middle Tennessee participated in the study. Thirty-one students had EBD, five students had Attention Deficit Hyperactivity Disorder (ADHD), three had a learning disability (LD), one had a speech and language impairment, and two were categorized as having an intellectual disability. Twenty-three students were elementary age (kindergarten through fifth grade) and 19 were secondary age (sixth through eighth

16

grade). Participants' academic achievement was assessed using the Woodcock Johnson III Test of Achievement (Woodcock, McGrew, & Mather, 2001), while their social/behavioral performance was assessed through teacher-completed behavior rating scales from the Social Skills Rating System (Gresham & Elliot, 1990), and the Walker-McConnell Scale of Social Competence and School Adjustment (Walker & McConnell, 1995).

The researchers' analysis indicated that participants with EBD in elementary school had higher performance in broad math and reading comprehension, and lower absenteeism than participants with EBD from middle school. Meanwhile, participants with EBD in middle school had higher oral reading fluency, academic competence, and school adjustment scores than students with EBD in elementary school. Despite the differences between age groups, this study illustrated that overall students with EBD demonstrated below average academic performance as compared to their peers with other disabilities. In addition, a review of disciplinary referrals of these participants found that negative narrative comments and disciplinary referrals exceeded the normative levels for their respective age groups, and were higher than their peers with other disabilities who also participated in this study. This study indicates that students with EBD face greater academic challenges across peers with and without disabilities in their respective age groups.

In another study examining academic characteristics of students with EBD Wagner and Cameto (2004) used the Special Education Elementary Longitudinal Study (SEELS) and the National Longitudinal Transition Study-2 (NLTS2) to describe the complex array

of obstacles that students with EBD face in school. Researchers analyzed connections between the poor academic and social limitations of students with EBD and the poor outcomes that they face in school and adult life using the SEELS and NLTS2 data. The results of this analysis illustrated a variety of characteristics present in participants with EBD. Parents of participants with EBD at the elementary level reported their children with EBD displayed significantly lower social skills on all measures when compared to their peers with other disabilities. In addition, parents reported that their children had other disabling conditions with almost two-thirds indicating their children also had Attention-Deficit Disorder or Attention-Deficit Hyperactivity Disorder.

Children with EBD were also more likely to score low on the self-control subscale of the Social Skills Rating System (Gresham & Elliot, 1990) and exhibit receptive language difficulties. About 33% of parents of students with EBD at the secondary level reported their children had trouble carrying on a conversation, while 44% of parents of students with EBD in the elementary and middle school level also report the same difficulty. Academically, six in 10 students with EBD scored in the bottom quartile in the area of reading. The results of this study indicate that students with EBD display poor self-control skills, have receptive language difficulties and challenges carrying conversations, as well as inadequate reading skills. These findings confirm the substantial obstacles that students with EBD face both academically and socially.

Social skills. In studies using tasks to determine social competence, students with EBD continue to display fewer prosocial behaviors than their non-EBD peers. Rinaldi, Kates, and Welton (2008) examined how students at risk for EBD negotiate social

exchanges compared to peers without EBD. The participants were split into subgroups

(students with EBD and students without EBD) based on their scores on the Behavioral

Assessment System for Children (Reynolds & Kamphaus, 2002). Upon completion of the

assessment, 57 participants for EBD (23 females and 34 males), and 57 participants

without EBD were identified. After being divided up, the participants completed three

tasks aimed at figuring out how students react when faced with cooperative or

competitive tasks. The cooperative task required participants to work together to make a

model of K'Nex pieces, while the competitive task encouraged participants to outperform

opposing teams in speed of building a model.

Results of this study showed that participants with EBD had fewer prosocial

behaviors than participants without EBD. In the competitive task, students with EBD

averaged 10.72 prosocial behaviors, such as cooperation, sharing, and helping, compared

to 16.91 for the participants without EBD. In cooperative tasks, participants with EBD

displayed 22.28 prosocial behaviors compared to 30.82 for students without EBD. When

comparing the cooperative and competitive tasks, this study highlighted that the type of

task all participants were asked to engage in, played a role in social interactions. One

notable data point was that participants without EBD displayed greater social skills in

cooperative tasks compared to competitive tasks, however, no matter the task type,

participants with EBD continued to display fewer prosocial behaviors than their typically

developing peers.

While the previous study illustrates differences between students with EBD and

typically developing students it is also important to examine differences between students

with EBD and students with LD. Lane, Carter, Peirson, and Glaeser (2006) conducted a study to extend the research on academic, social, and behavioral performance with students with EBD and LD in high school. Their objectives were to examine the various characteristics of students with EBD and LD using multiple measures and assessments.

The participants in this study were 45 high school students with EBD and 49 high school students with LD randomly selected from four high schools, all of whom were receiving special education services. The participants were selected from two large, ethnically and culturally diverse suburban southern California school districts that served students with EBD. Participants were drawn from four different schools, two public high schools and two alternative high schools. The teachers of the participants filled out the SSRS (Gresham & Elliott, 1990) and the Walker-McConnell SCSA (Walker & McConnell, 1995) to assess social, academic, and behavioral characteristics. Researchers also conducted a review of school archival records, including files in the cumulative folders for each participant.

The results of this study indicated that teachers rated high school participants with EBD, as having significantly lower levels of social competence and higher rates of problem behaviors compared to participants with LD. Participants with EBD also had more negative narrative comments in their cumulative folders compared to participants with LD. The results of this study indicate the low social competence and high rates of problem behaviors that participants with EBD display even when compared to students with other disabilities such as LD.

The studies reviewed in this section suggest that students with EBD perform below expectations in academic and social areas. Students with EBD display fewer social skills when compared to their typical peers (Rinaldi et al., 2008), and also had lower social competence than other peers with disabilities (Lane et al., 2006). Thus, it is important to examine the use of social skills interventions to address social competence deficits in students with EBD. Social skills interventions will be explored in the following section.

Social Skills Interventions for Students with EBD

Students with EBD have severe social competence deficits (Lane et al., 2006) which impact their ability to build and maintain relationships (Cullinan & Sabornie, 2004; Gresham et al., 2004). Thus, it is important to investigate what the research says about results of social skills interventions for students with EBD. This section surveys the current landscape of the research literature regarding the use of social skill interventions with students with EBD.

Improving classroom behavior. A study conducted by Wilhite and Bullock (2012) aimed to evaluate the impact of the WhyTry Social Skills program (Moore, 2008) on students with EBD. The WhyTry social skills program was implemented every day for one hour, for five weeks on 15 students on a specific alternative campus. This study used a mixed-methods design for the purpose of obtaining quantitative and qualitative data. There were three primary criteria used for inclusion of participants in the study: (a) students received special education services for emotional and behavioral problems, (b) were between the ages of 10 and 17, and (c) attended an alternative campus. Participants were divided into groups for age specific intervention. The younger students (ages 10-13)

were in the social skills group, while the older students (ages 14–17) were in the Teen Leadership Group.

Researchers set out to examine the results of the WhyTry intervention for a variety of reasons. They wanted to explore what effect the WhyTry social skills program had on students' school success (i.e. attendance, grades, and office disciplinary referrals). Next, they attempted to measure what changes would occur in students' scores on the behavioral rating scales as a result of participating in the WhyTry social skills program. Thirdly, they wanted to examine what things motivated students to be successful in school. Finally, they attempted to understand the students' and teachers' perceptions of the WhyTry social skills program.

This program taught all participants in the study social skills through different mediums such as stories and visuals. For three days a week, the intervention taught visual analogies in the students' classroom. These sessions incorporated popular music styles, journal activities, visual analogies, and direct instruction from the researcher. The other two days in the week, the intervention activities were rotated between the classroom, the gym, and outside depending on the activity. These activities consisted of small ropes course games where the whole group had to work together to achieve a collective goal, and reality-based games that assisted in showing students real-life consequences for their actions.

Through the qualitative portion of this study, researchers were trying to determine the students' and teachers' perception of the social skills intervention system that they were using in this study. Observations of students' interactions with peers, interactions with

teachers, academic engagement, and emotional and behavioral reactions to different situations (e.g. peer teasing, teacher directives, positive reinforcement, point sheets) were taken two weeks prior to the beginning of the study, and interviews were also conducted with all of the students and teachers prior to the study beginning. The interviews included inquiries focused on several topics (e.g. motivation for school success, self-esteem, positive attitude, reasons for behavior). Pre-intervention observations and interviews were compared with post-intervention observations and interviews to assess differences in students' emotional and behavioral responses to the intervention, and changes in students' motivation, self-esteem and attitudes. Finally, researchers analyzed teacher interviews for differences in their perceptions of the students before and after the intervention.

Results of this study indicated that the WhyTry program had the most positive impact on the older Teen Leadership Group. These participants demonstrated a significant reduction in office referrals from pre to post intervention, and displayed higher levels of motivation, self-esteem, and attitudes in the classroom. Participants also had a significant reduction in problem behaviors such as disruptions, inappropriate language, and fighting. Research results, measured through pre-post data attendance, grades, office disciplinary referrals, the BASC-2 rating scale (Reynolds & Kamphaus, 2004), and the Children's Hope Scale (Snyder et al. 1997), also confirmed that the WhyTry SST intervention increased the students' ability to initiate and carry out goals. Study results also provided insight into the motivation to learn for students. The main topics that emerged as motivation for the students' learning were, family, friends, and the law. Overall, the

students reported that the social skills training benefited them by teaching them new things like how to be a leader, and how to express yourself. Two teachers stated that the social skills training helped students to learn how to take turns talking, how to listen, and how to work as a team. Even with these promising results, one substantial limitation of this study was that participants did not get the opportunity to interact with typical peers, thus eliminating their opportunity to generalize learned skills. The current study attempts to fill this gap by using peer-mediators in the study itself, and later giving participants the opportunity to display their skills in a generalized setting.

Another study conducted by Blood, Johnson, Ridenour, Simmons, and Crouch (2011) used a social skills intervention to reduce disruptive behavior such as calling out, and increase on task behavior in one student with EBD. A single-subject changing-conditions (A-B-BC) design was used to assess the effects of video modeling and a combination of video modeling and self-monitoring on the participant's on-task and disruptive behavior. Researchers attempted to implement those strategies over 11 training sessions, for a total of 16 days including the baseline phase.

Before the video-modeling and self-monitoring components were implemented, the participant was taught to differentiate between on-task and off-task behaviors. He was then taught to record these behaviors on a self-monitoring sheet. Then, during intervention the video model was introduced, in which a video of students displaying appropriate classroom behaviors was shown. The narration in the video included statements about how students should be looking at the teacher when they are talking, and how they should raise their hand to ask questions. The video presented appropriate

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social etiquette in a classroom setting. The second component of the intervention was self-monitoring, where the student recorded his behavior on a data sheet.

Results of this study showed that introducing video modeling led to an immediate increase in on task behavior, and a decrease in disruptive behavior, though results were inconsistent. However, when video-modeling and self-monitoring were both used, the results showed consistent increases in on task behavior, and decreases in disruptive behavior. These results suggest that an intervention that presents appropriate social behaviors for students with EBD can be very effective in increasing on task behavior, and reducing disruptive behaviors. A few limitations of the study included the small sample size, lack of peer-mediation, and non-existent opportunities to display skills with typical peers. The current study attempts to incorporate all of these missing elements into the research design.

In a third study, Chen and Bullock (2004) examined the effects of a social skills intervention on students with EBD using literature, telecommunications, and social skills activities. Instrumentation included teaching staff ratings of subjects and structured interviews. There was also a baseline test, which consisted of the pre-intervention teaching staff ratings and teaching staff interviews. Researchers attempted to measure the effect of the intervention on problem behaviors and prosocial behaviors of students with EBD as determined by the Behavior Dimensions Rating Scale (BDRS), (Bullock & Wilson, 1989).

Eight males and one female in grades one through seven participated in the study, and all of them received special education services under the eligibility category of

emotional/behavioral disorders. The social skill intervention continued over an eight-week period, for a total of 32 sessions. The social skills intervention included the reading of a story that had the themes of relationships with authority figures, sacrifice, and good versus evil, after which participants were given the opportunity to use online characters to come up with dialogue, and interact with each other virtually around the story theme. Social skills activities such as role-playing were also implemented. In the second phase of the study participants interacted with the characters from the story online with the younger participants asking questions about the text, and the older participants answering them. This activity helped the participants develop teamwork and turn-taking skills. The last phase of the intervention was designed to help the participants practice their newly acquired skills by engaging in discussions, singing group songs, and doing skits. These experiences helped participants engage in positive interactions and raise their self-esteem.

Results of this study indicated participants displayed increased social competence through improved cooperation, participation, and patience as measured by the BDRS (Bullock & Wilson, 1989). Researchers also noted decreased arguments between participants. There was an overall decrease in problem behavior and an increase in pro-social behaviors. Further, teachers reported that the social skills intervention, which incorporated telecommunications and technology, was effective in decreasing problem behaviors and increasing prosocial behaviors in almost all of the participants involved. This study demonstrated the combination of story-reading, online interactions, and group social skills activities such as role-playing proved to be an effective social skills intervention for students with EBD. Results of this study are promising, however

participants only interacted with other participants with EBD, limiting the opportunity to generalize skills to nondisabled peers. The current study aims to incorporate peer models in the intervention and generalization portions of the study.

In another story-based social skills intervention, Lo, Loe, and Cartledge (2002) conducted a study with five 3rd and 4th grade students that had been identified as at risk for EBD. In this study, three dependent variables were examined: (a) on-task behavior, (b) appropriate conflict resolution, and (c) cooperation. Participants were selected on four criteria: (a) nominated by their teachers as having frequent behavior problems and deficient social skills, (b) problem behaviors that fell above the 90th percentile and social skills that fell below the 25th percentile on the Social Skill Rating Scale (Gresham & Elliott, 1990), (c) researcher observations noted a higher than average rate of antisocial behavior and a lower than average rate of age-appropriate social behavior, and (d) parents' informed consent.

The social skills intervention itself was adapted from the curriculum Working Together: Building Children's Social Skills Through Folk Literature (Cartledge & Kleefeld, 1994). All training and data collection sessions for baseline, intervention, and maintenance conditions took place in a pull-out, small group session during students' morning self-study period and data were collected for the final twenty minutes of this period. The social skill instruction was implemented for 25 to 30 minutes per lesson three times a week for 15 weeks. Social skills lessons included story posters, an audio cassette of the stories, parent letters, and activity sheets. Lessons were initially reviewed in a small group setting with the participants by letting them listen to the social skills story,

followed by a discussion in which participants would identify the skill that they were learning. Instructors then modeled the skill and participants practiced the skill, using games and role play activities. The participants then received feedback on their performance. For extra practice and maintenance of the skill, participants received homework, which was reviewed the next day, and then reinforced by researchers.

After the small-group intervention, classroom instruction of social skills was conducted by the classroom teacher. The five participants were in three different classrooms during this phase, so they all received this portion of social skill instruction from different teachers. These lessons were conducted in thirty minutes sessions two to three times a week. The content of these lessons provided a review of the skills previously learned in the small group instruction. The purpose of this phase of the study was primarily for maintenance and generalization of the skills reviewed in the intervention phase prior to this.

Data collectors collected frequency data for the amount of anti-social behaviors exhibited by the participants in twenty-minute observation sessions. These behaviors were defined as social rule violations, poor social interactions, aggression, cheating, lying, offending authority, and making threatening statements. Observations were conducted in the participants' classrooms three times a week during regular classroom instruction. Additionally, observations were conducted three times a week in the lunchroom to assess generalization of skills.

The results of this study were mixed across the five participants, but positive trends were noted. All participants showed an increase in prosocial behavior with increases in

on-task behaviors, appropriate conflict resolution, and cooperation. During the social

skills instruction four of five participants displayed a decreasing trend in antisocial

behaviors as noted by post-intervention socio-metric ratings by typical peers, in which

peers altered their views towards peers with EBD and were willing to accept them as

group members. Researchers attribute the variability in results to variety of factors, but

receiving social skills instruction in the classroom from different teachers may have

influenced overall results. As a whole however, participants seemed to benefit socially as

a result of this social skills intervention. While this study had positive results, more

research is needed to strengthen the literature base in this area.

Studies have also been conducted to understand the best mode of instruction when it

comes to social skill interventions. Morgan, Higgins, Miller, Pierce, Boone, and Tandy

(2016) conducted a seven-week study where they compared results of online instruction

to traditional instruction of a social skills intervention. Twenty-three students with EBD

were selected from six self-contained special education classrooms for students with

EBD. Social skills lessons were developed using direct instruction, guided practice, role-

play of the skills, and performance feedback. Social skills lessons were implemented

through traditional paper and pencil method and through an online model where

participants practiced learned skills in an online social environment.

Data was collected through a series of pre- and post-tests. The researchers examined

participants' knowledge of social skills, teacher and participants' perceptions about their

learning, and teacher and participants' beliefs about the importance of learning online

social skills. The intervention lasted for seven weeks, the first of which was dedicated to

pre-tests. This was followed by two weeks of instruction, before going into a one-week break. The intervention then again went into another two-weeks of instruction.

Results of this study showed that there was no significant difference in skill acquisition between traditional paper and pencil methods of social skill instruction and online instruction. Participants learned the target skills using both methods of delivery. In addition, participants felt online social skills were more important at the end of the intervention than at the beginning indicating that learning about online social skills helped them realize their importance. While these results are promising, researchers did note some significant limitations. First, all materials used in this study were designed by the researchers and therefore not evaluated for validity. Second, the short duration of the intervention was also noted as a limitation. Finally, the age range of students in the study was from 11 to 18 years old, in middle school to high school. No students from an elementary school setting participated, which limits the extent to which this study can be generalized across settings and age groups. Overall, however, this study further reinforces the effectiveness of social skill interventions on social skill acquisition, whether through traditional methods, or through online instruction.

Along with increasing positive social skills, social skill interventions have shown to be beneficial in decreasing negative social behaviors in students with EBD. McDaniel, Bruhn, and Troughton (2017) conducted a study in which they implemented the *Stop and Think* curriculum (Knoff, 2001) with students identified as having EBD, from two different special education classrooms. The intervention sessions occurred three times a week for 30 minutes in a four-week span of time. Participants were selected using teacher

nominations based on the participants' history with social problems, social behaviors that interfered with instruction, and behavior problems that had been unresponsive to previous interventions. The target behavior that researchers were attempting to decrease included negative social behaviors of arguing, teasing, verbal aggression, interruptions, leaving the assigned area, not keeping hands and feet to self, and socially inappropriate comments and language.

The Stop and Think curriculum (Knoff, 2001) organized skills into four groups; (a) survival skills, such as listening and following directions, (b) interpersonal skills, such as sharing, (c) problem-solving skills such as asking for help, and (d) conflict resolution skills, such as handling peer pressure. These skills were taught in a four-step process which was designed to help participants become aware of the problems, evaluate their options, apply strategies, and self-reinforce after they were done. Data collectors collected observational data during baseline, intervention, and generalization phases. Teachers also completed the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) for each participant.

Results of this study showed that all five participants had significant decreases from baseline to intervention in negative social behaviors such as arguing, teasing, verbal aggression, noncompliance, and unsafe behaviors. These behaviors continued to stay low and stable for all participants. In addition, four of the five participants went from abnormal to borderline in total difficulties on the SDQ. Besides having a small sample size of students from the second and third grades, researchers noted that a limitation of this study was that data was only collected during instructional times, meaning the effect

of this social skills intervention on participants' social skills during unstructured activities is unknown. Further research is needed to determine the true effect of the intervention in structured and unstructured settings, as the current study endeavors to do.

In a final study addressing classroom behaviors Anderson et al., (2018) examined the effects of a social skills intervention on the social interaction of three students with EBD. The three participants selected were from a suburban university laboratory school, and were selected based on two teacher rated screenings used to identify children at risk for internalizing and externalizing behaviors. The intervention consisted of four primary components: (a) social skills instruction, (b) adult mediation, (c) self-evaluation and reinforcement, and (d) parent involvement. Using lessons adapted from the Boys Town (Dowd & Tierney, 2005), and Skillstreaming (McGinnis & Goldstein, 1997) curriculums the researchers delivered social skill instruction to the participants in the classroom with skills practiced on the playground. Instruction consisted of teaching introduction and conversational skills, and skills on how to ask others to play. Lessons were done in fifteen-minute sessions three times a week, for a total of 26 sessions over a span of nine weeks.

The format of the lessons was done through several steps. First researchers explained and modeled the skill for the participants. Next, they practiced the skills with the participants, and then praised them when the skill was used appropriately. The next step was to provide feedback and correct the participant if some part of the skill they were practicing was performed in a way not instructed by researchers. Finally, researchers led a discussion with the participants on possible scenarios where the skill could be used. All

skills were taught to the participants individually until all of the participants could recite and implement all of the steps independently.

Adult mediation was the second component of this intervention. Researchers assigned an adult to observe and mediate with the participants based on how they were practicing skills and meeting individual goals. If the participant was practicing the skill appropriately, the mediator would praise him or her in the setting. If there were changes or adjustments needed in the application of the skill, the mediator would make corrections during the sessions on the playground.

The third component of this intervention incorporated self-evaluation and reinforcement. During the first social skills lesson, participants were taught how to self-evaluate. At the beginning of each play period, the mediator would speak with the participants individually about what goal they wanted to work on. If the participant was unable to think of a goal, the mediator would help them think of one, or even suggest one if necessary. At the end of the period, the participant would rate themselves by selecting a face with a smile, a neutral look, or a sad look based on their performance of the goal that they formulated at the beginning of the period. Rewards for meeting goals included extra recess time, edible reinforcers, and opportunities to color.

The final component of this program was parent involvement through notes that were sent home. After learning new skills, parents were informed of the skill learned, and the steps required to perform the skill successfully. There was also a section of the note left available for the parent or teacher to communicate messages or questions about the

intervention. Parents were requested to return the note back to the teacher at latest a week after receiving it. Observational data was collected throughout all phases of the study.

The results of the study showed that all participants had an immediate increase in positive social interactions indicating that the combination of the Boys Town (Dowd & Tierney, 2005) and Skillstreaming (McGinnis & Goldstein, 1997) social skills curriculum, paired with adult mediation, self-evaluation, and parent communication was effective in improving the social competence of students with EBD. Some limitations of this study included small sample size, and the short duration of the intervention. Furthermore, the study was conducted only with kindergarten students. Including older students in the study may have helped generalize the results to different age groups of students with EBD.

Improving game-related behavior. To assess the benefits of a social skills intervention during competitive game play situations, Moore, Cartledge, and Heckaman (1995) conducted a study that involved social skill instruction and self-monitoring for students with EBD in game-related scenarios. Participants in this study were three 14- and 15-year-old participants with EBD selected because of their difficulty with peer provocations and lack of sportsmanship. The study was conducted in a secondary school for students with EBD. Social skills instruction took place four to five times a week for a total of 23 sessions. Social skills instruction followed five steps: (a) providing a rationale of the skill being taught, including positive and negative scenarios of the skill, (b) modeling appropriate use of the skill, (c) role-playing with participants so they got an opportunity to practice, (d) discussing possible situations where participants may need to

utilize the skill they had just learned, and (e) assigning-homework to the participants for extra practice. After the instruction phase of the intervention, the skill of self-monitoring was implemented in which participants were instructed to reflect on their appropriate and inappropriate responses to winning and losing. Participants were observed in the classroom, immediately following the intervention and during their physical education class for the presence of six target behaviors: (a) inappropriate peer-reactive behaviors such as, hitting, kicking, pushing, or name-calling, (b) appropriate peer-reactive behaviors where the participant ignored or walked away from the participant trying to make him angry, (c) appropriate and inappropriate reactions to losing, and (d) appropriate and inappropriate reactions to winning.

Results of this study indicated that during baseline conditions, all three participants showed low frequencies of appropriate peer reactions, appropriate reactions to losing, and appropriate reactions to winning. During intervention, the frequency of all positive behaviors increased and the frequency of all negative behaviors decreased for all participants. Greater improvements were noted during the self-monitoring phase. The results showed that the intervention had a positive effect on the targeted behaviors for all participants. Though results of this study were positive more information is needed to determine whether this intervention would provide similar results with younger students. In addition, the generalization of skills learned in this intervention to typical peers remains unknown. The current study attempts to fill this gap in the literature.

Another study conducted by Samalot and Poretta (2013) examined the influence of social skills on the sport and game related behaviors of students with EBD. The

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participants in this study included six students; four male, and two female. These six

participants were selected based on their diagnosis of EBD and were identified as having

difficulty during physical education class and recess. All participants were from two

different alternative education programs designed to serve students with EBD and

displayed a variety of negative social behaviors including impulsive, disruptive, and

violent behaviors. Researchers adapted the curriculum, Appropriate Sport and Game

Behaviors (Moore et al., 1995) for the intervention. The intervention consisted of 15

lessons which emphasized appropriate game related behaviors such as respecting

equipment, congratulating the winner, avoiding blaming teammates, working

cooperatively, and following rules. The intervention highlighted appropriate behaviors

associated with losing, such as congratulating the winner, remaining positive, respecting

equipment, avoiding blaming teammates, and motivating yourself to continue practicing.

The intervention also addressed appropriate behaviors to display when winning a game,

such as avoiding criticizing the loser, accepting compliments, avoiding bragging, and

staying motivated. Intervention sessions took place before physical education class three

times per week and lasted about 20 to 25 for the 15 sessions.

Observers collected frequency data for all of the target behaviors from physical

educations classes and recess. The results showed that five of the six participants were

able to increase appropriate sport and game behaviors while simultaneously decreasing

inappropriate behaviors. However, only one participant was able to maintain intervention

levels in the generalization phase when the intervention was withdrawn. These results

suggest the social skills intervention was effective in helping students display more

prosocial behaviors and decrease negative behaviors in the immediate physical education class, however more research is needed on how to improve generalization of these skills to the recess setting. The current study attempts to provide more information to this body literature regarding the generalization of appropriate sport and game behaviors to the recess setting.

In all, the effects of social skill interventions on students with EBD seem to have a positive effect. Students experienced a reduction in problem behaviors and aggression while displaying more prosocial behaviors (McDaniel et al., 2017). The use of role-playing and directed discussions presented as common methods in the above interventions to improve social skills, and these methods demonstrated a positive effect on social skills of students with EBD. However, this body of literature is limited in examining the generalization of skills to settings with typical peers, as many studies took place in alternative-school settings. The current study aspires to add to this body of literature by examining a social skills intervention for students with EBD in a public-school setting that includes a generalization component.

Peer-Mediated Social Skills Interventions

Social skills interventions employ many approaches in their designs, such as role-playing and reflective discussions. Amongst these approaches are peer-mediated strategies. Peer-mediated interventions include interventions where typically developing peers are provided with opportunities to interact with and help learners with disabilities acquire new behavior, communication, and social skills by increasing social opportunities within natural environments (Wong et al., 2014). The following studies delve into

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research studies that use peer-mediated strategies in social skills interventions with students with EBD.

Robinson-Ervon et al. (2016) conducted a study of a peer-mediated intervention with sixth-grade students from an urban middle school. Researchers investigated changes in participants' ability to follow directions using culturally responsive online social skills instruction. The participants in the study were selected based on: (a) enrollment in sixth grade, (b) having the diagnosis of EBD, (c) parental permission, and (d) scoring below the 50th percentile on the Social Skills Improvement Scale-Teacher (SSIS-T) (Gresham & Elliott, 2008). General education peers also participated in this study and were selected based on the following criteria (a) enrolled in the sixth grade, (b) parental permission to participate, (c) nominated by all four sixth-grade teachers as not having discipline referrals during the school year, and (d) being socially assertive with the ability to interact successfully with the intervention participants. Peers were trained during three 50-minute training sessions. The first training consisted of a rationale for the practice sessions and a description of their role in the intervention. The second day consisted of the peers discussing the importance of following adult directions and the consequences associated with not following them. Then peers participated in a PowerPoint presentation where they verbally stated and dictated the steps of following adult directions. The last day of their training, peers acted out skits pertaining to following adult directions. After the skit, the other peers critiqued their performance and provided feedback for improvement.

The next three weeks were dedicated to training the participants with EBD. The first week consisted of learning new skills, reading stories, answering comprehension questions on the computer, and watching videos related to the social skill. Following these computer-based lesson, days 8-17 were spent practicing the skills with general education peers in researcher-led practice sessions. During these sessions, the participants had the opportunity to demonstrate their mastery of the skills that they learned. In days 18-20, participants watched and analyzed videos about the skill and answered questions based on these skills on the computer. Furthermore, they were required to discuss in writing, the difference in steps between compliant and non-compliant displays of following adult directions.

Researchers collected data through baseline, intervention, and generalization phases. Data was collected for all participants, including general education peers, in the art classroom, gym, Spanish classroom, and computer classroom. Results of this study indicated that all participants showed an increase in following adult directions with an average increase of about 20.6%. Anecdotal data from the classroom teachers and teaching assistants indicated an improvement in participants' willingness to follow adult directions after the intervention. Participants themselves stated that this intervention was effective in helping them understand and follow adult directions more often. Some participants stated that the intervention made them think deeply about the benefits of following adult directions. A limitation of this study was the small sample size, as well as only having students from a middle school setting. Having a wider age range of participants may help in generalizing the results to the whole population. This study

reinforces the effectiveness of social skill interventions in improving social behaviors of students with EBD. This particular study did it through peer-mediation and culturally responsive online instruction, indicating peer-mediated interventions may be particularly effective in improving social competence in students with EBD.

In a second study using peer-mediated intervention, Wu, Lo, Feng, and Lo (2010), examined the effect of a social skills intervention on the on-task behavior, conflict resolution abilities, and cooperation of participants with EBD. Participants in this study were two 9-year old students at risk for EBD. Their eligibility for this study was determined by teacher and peer socio-metric rating scales indicating these two students received the highest peer nominations as being someone they disliked. Four peers were also selected to be a part of the study as positive models because they were nominated as students that were most liked in their class by their peers. Studies were conducted in a pull-out location.

The intervention itself consisted of an orientation, followed by 18 scripted lessons following an 8-step process with each session lasting 40 minutes, for a total of 32 sessions. The first step was a warm up, followed by the identification of the skill (step two). Next was modeling the skill learned (step three), and rehearsing it with peers (step four). The fifth step was role-playing with peers to further practice the skill. Their efforts were then reinforced in the sixth step to acknowledge their effort. The seventh step was feedback from researchers about their performance. Finally, the participants received a take-home exercise intended to help them reflect, apply, and practice the skill they had learned. Data was collected through observations of target behaviors. On-task behaviors

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and conflict resolution were calculated as percentages of successful intervals and cooperation was recorded using frequency data collection methods.

Results of this study indicated robust increases for both participants in all three target skills. For the first participant, percentages increased from $M=23.3\%$ to $M=75.8\%$ for on-task behaviors, $M=13.1\%$ to $M=61.7\%$, for conflict resolution, and $M=26.5\%$ to $M=81.7\%$ for cooperation. For the second participant, increases went from $M=38.8\%$ to $M=84.7\%$ for on-task behavior, $M=11.3\%$ to $M=66.3\%$ for conflict resolution, and $M=28.2\%$ to $M=86.7\%$ for cooperation. These positive outcomes were sustained during the maintenance phase, and were even observed in natural settings one month after the study had been terminated. The results of this study point to the effectiveness of peer-mediated social skill interventions in improving the social competence of students with or at risk for EBD.

Peer-mediated strategies paired with self-management procedures have also shown to help in social skills acquisition for students with behavioral disorders. Nelson, Smith, and Colvin (1995) conducted a study with three participants from a rural school in Washington where they implemented strategies to help participants improve their social competence. The intervention sessions occurred prior to recess every day for 33 total sessions over seven weeks. All three of the participants were selected based on three criteria: (a) high rates of referrals from recess supervisors, teachers, and the principal, (b) high rates of recess rule infractions and negative interactions with peers and adults as reported by the recess supervisor, and (c) observation by the researchers to have had negative interactions with peers and adults. The study also included three participants that

were to serve as peer-mediators during the intervention. Peer participants were selected based on (a) whether or not they were compatible with the participants that were selected for the intervention, (b) had low rates of disciplinary referrals, (c) low rates of negative social interactions with peers and adults, and (d) expressed a desire to participate.

The intervention had two primary components. The first was teaching the skill of self-monitoring and the second was getting the peer-mediators to work effectively with the participants targeted in the intervention. The study aimed to specifically improve the recess behavior of participants, so the intervention focused primarily on explaining recess rules and providing a rationale for using them. In the self-management portion of the intervention, participants were taught to give themselves a rating at the end of recess based on their behavior. If the rating of the participant was within one point of the peer-mediator's rating, the participant was awarded all of the points for that recess and given rewards accordingly. The rewards included free time, computer time, and video game play.

Observers used an interval recording system to collect data on the participants through the baseline and intervention phases. The results of the study indicated that all three participants showed improvements in social skills acquisition and reduction in negative social behaviors at the conclusion of study. Furthermore, the results were generalized to lunch recess at the removal of the intervention, further indicating the effectiveness of this peer-mediated intervention. The results of this study reinforce the efficacy of peer-mediated social skills interventions in improving the social competence of participants with EBD however the study was limited by the lack of diversity in age of

the participants. More research is needed on the effects of such interventions across a variety of ages.

Several social skills interventions introduced to students with EBD have targeted the reduction of impulsivity and anger while simultaneously increasing problem-solving behaviors (Feindler & Ecton, 1986). Teaching young adults to respond to and express anger appropriately may improve their social relationships and acceptance (Colvin, Tobin, Beard, Hagan, & Sprague, 1998). Presley and Hughes (2000), attempted to conduct such a study with high school students that had EBD. The purpose of their study was to evaluate the effects of a peer-delivered social skills program designed to help participants express anger appropriately. The participants in this study were four high school students enrolled in a class for students with behavioral disorders. They were selected based on their disability and need for an intervention specific to anger management. There were also three peer trainers in this study that were selected from general education classes. These participants were selected based on their attendance, willingness to participate, and parent consent. The sessions were conducted for 20-30 minutes three times a week, for a total of 21 sessions.

The study took place in three phases; baseline, instruction, and follow-up. The study took place in two classrooms near the classroom of the participants with EBD. Researchers were looking for four primary behaviors during data collection. The first was the number of steps that the participants followed from the intervention guidelines. The next two behaviors were the volume of their voices during role play (defined simply as the loudness in which a participant responded) and nonverbal affect during role play

(defined as the facial expression). The last behavior was the frequency of appropriate responses to anger-provoking situations. Before the intervention portion with the participants with EBD, researchers provided individual training sessions to the typical peers who were to serve as peer mediators. During these instructional sessions peer mediators were taught to conduct the intervention by following a script. After instruction by researchers, the mediators would practice following the script and would subsequently receive feedback by researchers on ways they could improve. Mediators were required to perform 100% of the steps on the script before they conducted the intervention with the participants with EBD.

During the baseline phase of the intervention participants were told that they were going to be observed in anger-provoking situations to see how they would respond. At this point researchers were looking to see how many of the steps from the intervention checklist the participants would follow. No feedback was given during this phase, though participants were praised for participating. Following the baseline phase, social skills instruction was introduced. During this phase is when peer trainers instructed participants on ways to appropriately express their anger using the 11 steps of the Triple A strategy. The Triple A strategy used the primary three steps of assess, amend, and act. During the "assess" step, participants were instructed to perform a six-step self-instructional sequence that included waiting for three seconds before responding to situations. After this the participant was instructed to ask and answer a series of five self-reflective questions designed to help them control their impulsivity. During the "amend" step participants were taught to go through three additional steps that would help guide them

to have an appropriate response to an anger-provoking situation. Participants were required to tell the other actor in the role play situation how they felt, instead of responding in a negative way, such as physically. Finally, during the "act" step participants would perform the responses chosen during the "amend" step, along with verbally evaluating their performance.

After the intervention portion ended, teachers, general education peers, and participants were all given a survey meant to gauge the effectiveness of the intervention. In addition, the questions asked participants whether the situations used in the role play scenarios were appropriate. The results of this study showed improvements in target behaviors, such as the expression of anger, volume of voice, and nonverbal affect, for all participants with exception of the nonverbal affect area for two participants. During baseline, no participant completed more than two steps of the Triple-A process. Following the intervention, all participants, including general education peers, demonstrated increases in the number of anger expression steps they followed independently. Another result noted was that after the intervention all participants received ratings of "somewhat positive" for the nonverbal affect displayed. All participants also received the highest rating of "just right" for volume of voice. This study indicates that peer-mediated social skills instruction helps students with EBD manage their anger, thus improving their overall social competence. Further research needs to be conducted to determine the effect of this type of study on students from a younger age group.

Peer-mediated social skills interventions have helped students with EBD improve a variety of behaviors, including aggression, negative verbal remarks, and out of seat behaviors. These interventions have also been effective in improving positive peer relationships. Kamps, Kravits, Stolze, and Swaggart (1999) conducted a one-year study within a larger 4-year longitudinal program for students with EBD. Treatment procedures were in place for one year for the control group, and 1.5 years for the target group. The first cohort of participants received a peer-mediated intervention and the following cohorts received the intervention to replicate effects. The second cohort of participants served as the cohort group in this study.

The group of participants that received the intervention included 28 participants, 11 of whom were identified as having EBD. The control group included 24 participants, with six of these participants being identified as students with EBD. The intervention was provided within the classrooms that the participants attended. Treatment consisted of a program designed to provide a variety of tools for educators working with students with EBD. Lessons were selected from several curriculums including Skillstreaming the Elementary School Child (McGinnis & Goldstein, 1997), the ASSIST Program (Affective Social Skills: Instructional Strategies and Techniques; Huggins, 1995), and a district sponsored program, Violence Prevention: Second Step (Committee for Children, 1990). The skills selected were following directions, task completion, making appropriate choices, and accepting consequences. Additionally, skills that promoted positive peer relationships were also taught, such as joining a group, giving compliments, and appropriate play. Finally, participants were taught problem solving strategies such as

negotiation, problem solving, and anger management. The final component of this intervention was the class-wide peer tutoring program where participants with EBD were paired with other participants to do reading activities. These activities consisted of comprehension activities, awarding points based on performance, and tallying team or class total points.

The results of this study indicated that this peer-mediated social skills intervention improved several key target behaviors for members of the target group as compared to the control group. The target group showed a decreasing trend in aggression as compared to the control group, who showed an increasing trend. Out of seat behaviors were also significantly less for the target group compared to the control group. Overall disruptions were noted to be lower for the target group compared to the control group. These results indicate that peer-mediated social skill interventions can be effective in increasing positive social behaviors and decreasing negative behaviors in students with EBD. Though the results of this study were positive, further research is needed to determine the effect of this type of intervention on students from a younger age group.

The results of the studies in this section indicate that peer-mediated social skill interventions are effective in increasing the social competence of students with EBD. Because peer-mediators are often in the same environments as their peers with EBD, they are often well-positioned to provide guidance (Mathur & Rutherford, 1991). Peer-mediated interventions are also beneficial because they give students with EBD increased opportunities to interact with their typically developing peers (Smith & Fowler, 1984). Peer-mediated interventions have helped students with EBD manage their anger (Presley

& Hughes, 2000) improve peer relationships (Kohler et al., 1995) and improve overall social competence (Kamps, Kravits, Stolze, & Swaggart, 1999). Despite the encouraging results however, the body of literature is still scarce. Specifically, studies aiming to measure effects of peer-mediated social skills interventions for elementary aged students with EBD, are limited. The current study endeavors to fill this gap in the literature.

Summary

In the first set of studies, the general barriers that students with EBD face were identified. The conclusion from that set of studies showed that major barriers for students with EBD are the lack of social skills and limited social competence. The lack of these essential skills manifests in aggression, problem behaviors, drop-outs, and difficulties later in life. In the second section, social skill interventions for students with EBD were shown to reduce aggression and problem behaviors and increase social competence (Lo, Loe, & Cartledge, 2002). Finally, studies that integrated peer-mediators also showed to be effective in social skills improvements for students with EBD and increased opportunities for students with EBD to interact with typical peers (Robinson-Ervon et al., 2016; Wu et al., 2010).

Despite these encouraging findings there exist several limitations in this body of work. Most studies in this research area examined students from middle school or high school settings, and one or two investigated young participants from kindergarten settings. Few studies examined students with EBD from elementary settings. Addressing the social competence of students with EBD in elementary school would seem important to improving long-term outcomes for these students. More research in this area is greatly

needed. Furthermore, these studies examined a broad range of target social skills, yet few studies looked specifically at improving the skills of compliment-giving and sharing. These skills are used frequently in elementary settings but are often missing in students with EBD. Finally, the general scarcity in the amount of relevant research in this area indicates that further research is needed to produce results that can be generalized to a range of students with EBD. The current study will attempt to fill this void and add more depth to an area of research that is greatly lacking.

Theoretical Framework

The present study of a peer-mediated intervention draws on the theoretical framework of Lev Vygotsky's Sociocultural Theory (1978). Socio-cultural theory considers the contributions of society to the development of an individual. This theory suggests that human learning is a social process, and that this social process involves parents, caregivers, peers, and the culture which within the individual is being raised (Vygotsky, 1978). Vygotsky placed a great emphasis on the social factors that influence development, such as the important role of social interactions in cognitive development. Vygotsky's work endorses the belief that human learning is largely a social process.

One important aspect of Vygotsky's theory is the role of mediation in development (Lantolf, 2000). Mediation is defined by researchers as the symbolic tools or artifacts created by human culture which help us establish an indirect relationship between ourselves, others, and the world (Lantolf, 2000). In the context of social skills interventions, peer-mediation can mean the influence that a peer's presence has on

another peer. In Vygotskian psychology, mediation is one of the most important aspects of learning (Lantolf, 2000). Vygotsky argues against the view that a child's independent problem-solving abilities are the only indicator of intelligence. In his view, the ability to acquire skills and improve them based on mediation is also a valid measure of intelligence.

Zone of Proximal Development

The concept of the Zone of Proximal Development (ZPD) refers to the distance between the child's actual level of development and his or her potential level of development when appropriately mediated (Kozulin, Gindis, Ageyev, & Miller, 2003). ZPD represents a level of knowledge that is just slightly beyond an individual's current level of knowledge, and includes all skills and knowledge that a person does not yet understand or perform independently, but is capable of learning with guidance. Children often stretch their knowledge and skills by observing someone who is slightly more advanced than they are at any given activity. According to Vygotsky (1978), through observations and mediation, individuals are able to progressively extend their Zone of Proximal Development. In this theory, children can improve in their abilities simply by observing another individual who is slightly more advanced than them at any given skill. More specifically, individuals that are more knowledgeable than thosed they are mentoring can move them to a higher level of knowledge. For example, if a child interacts with another child who is slightly more advanced in a certain set of skills, according to Vygotsky, his/her level of ability is also likely to increase simply through interaction.

The current study endeavors to implement a social skills intervention with students with EBD through a variety of strategies including the use of peer mediators to increase the effectiveness of the implementation. Drawing on the work of Vygotsky and the concepts of social-cultural theory and ZPD (1978), the current study incorporates peer-mediators in the implementation of curriculum in attempt to introduce participants with EBD to positive peer models who can display the skills that students with EBD must acquire. Observation of positive peer models who display appropriate social skills may improve the social competence of students with EBD.

Understanding socio-cultural theory in general and ZPD in particular can help educators assess students for their current level of knowledge and then offer instruction that increases that knowledge. For example, educators can organize instructional groups to include students of varying abilities to help improve the skills of the students who are at the lowest level. In social opportunities particularly, students can learn from peers about how to improve their own social interactions. The current study incorporates peer-mediation as a means to improve the social interactions of the students with EBD.

Chapter Three: Method

Social skills are an important part of a child's life and evidence suggests that social skills can play a major role in a student's ability to develop relationships, produce satisfactory school adjustment, and develop coping strategies to adapt to social demands (Gresham, Van, & Cook, 2006). Students with emotional and behavioral disorders (EBD) are challenged by social skill deficits, which can lead to behavioral problems and difficulty progressing in academics (Cullinan & Sabornie, 2004; Gresham et al., 2004; Landrum et al., 2003; Walker et al., 1992). Additionally, students with EBD have social problem-solving difficulties and are generally less socially competent when evaluated next to their peers (Dumas et al., 1996; Rinaldi, 2002). Sadly, these outcomes continue into adult life, as many students with EBD have negative employment outcomes and a high need for mental health services (Bullis & Yovanoff, 2006). Thus, finding interventions to improve the social competency of students with EBD is critical to improving their long-term success.

The number of studies that address social skills interventions for students with EBD however, remains small (Kamps et al. 1992; Reddy, 2012), and an even smaller number of those studies have focused on improving compliment giving, sharing, and sportsmanship as target behaviors. While a few studies aimed at improving sharing, compliment-giving, and sportsmanship behaviors have been conducted with students with autism spectrum disorders, few have included students with EBD (Kamps et al., 1992; Reddy, 2012) though these skills are often problematic for students with EBD. Some studies of social skills interventions found to be effective at improving academic skills

and decreasing disruptive behaviors in students with EBD (Ryan, Pierce, & Mooney, 2008; Ryan et al., 2004; Sutherland & Snyder, 2007) have included typical peers in the social skills interventions (Maag, 2006). Including typical peer models is thought to be important for the students with EBD to generalize the skills they have learned to the individuals with whom the skills should be used, but the overall number of studies of peer-mediated interventions with students with EBD remains small and further research is needed in this area. The current study aims to examine the impact of explicit teaching of the social skills of sharing, giving compliments, and demonstrating sportsmanship in students with EBD, while incorporating typically developing peers from general education classrooms as role models in the intervention. The current study will address the following research questions:

1. What is the effect of a social skills intervention on increasing sharing in students with EBD?

2. What is the effect of a social skills intervention on increasing compliments in students with EBD?

3. What is the effect of a social skills intervention on the sportsmanship skills of students with EBD?

4. Were students with EBD able to generalize skills learned in the intervention to a new setting?

Research Design

A multiple baseline across behaviors design was used in this study. A multiple baseline design was appropriate for this study because it allowed the researcher to isolate

and collect data on target behaviors throughout the intervention phases, and subsequently

compare the effect of the intervention to baseline phases. This design helped to clarify if

in fact the intervention increased compliment-giving, sharing, and sportsmanship skills.

Multiple-baseline studies fall into the category of single case design which allow for each

individual participant to serve as his or her own control (Horner et al., 2005). This

allowed the researcher to compare dependent variables across conditions.

Using the multiple baseline across behaviors research design all participants began

the baseline phase at the same time. Following a stabilization of baseline data for all three

participants, the intervention for behavior one was introduced. In this first phase of the

intervention, the skill of sharing was introduced. Following a stabilization of this data, the

skill of complimenting was introduced. During this phase, data was still collected on

sharing, but instruction during this phase focused on complimenting. Following a

stabilization of complimenting data, researchers introduced the skill of sportsmanship.

During this phase, data was still collected on occurrences of sharing and complimenting,

but the instruction focused on appropriate sportsmanship. Data was collected on all three

target skills across all phases of the intervention, however, after a skill had been

introduced and data had stabilized, the skill went into a maintenance phase, meaning

instruction no longer occurred on that skill. After five days of intervention for the skill of

sportsmanship, another five to fifteen days of maintenance occurred for all three skills.

Following the last day of maintenance, generalization probes occurred on the playground

during lunch recess. See Figure 1 for a graphic representation of the study.

Day 1-5	Day 6-10	Day 11-15	Day 16-20	Day 21-25	Day 26-28
Baseline-Sharing	Intervention-Sharing	Maintenance-Sharing			Generalization Probes
Baseline-Compliments		Intervention-Compliments	Maintenance-Compliments		Generalization Probes
Baseline-Sportsmanship			Intervention-Sportsmanship	Maintenance-Sportsmanship	Generalization Probes

Figure 1. Graphic representation of the study.

Setting

The study took place in a public elementary school in northern California. Approximately 500 students attended this school, with a majority of the student body from a low socio-economic status. Eighty-four percent of the students at the school qualified for free and reduced priced lunch, 84% of the student body were Hispanic, 8% were of Asian or Pacific Islander decent, 2% were Caucasian, and another 2% were African-American students. The remaining students were American Indian, or of mixed descent.

The staff was comprised of 24 teachers, including three teachers that taught in special education classes for students with moderate to severe disabilities. Two of the special education classes were specifically for students with EBD. The school range was from kindergarten to fifth grade. The student to teacher ratio was 20:1, and five of the teachers had been at that school for more than ten years. The current principal was fairly new, with four years of experience in administration.

This specific study took place in the fourth and fifth grade special education class for students with EBD. The teacher in the classroom held an Education Specialist credential

for teaching students with moderate to severe disabilities and had taught in the special

education setting for students with moderate to severe disabilities for five years. He also

served as the primary researcher for this study. The classroom itself had 10 students, with

two para-educators. Other support staff included a behavioral assistant, and a program

therapist who was responsible for giving the students individual counseling.

Participants

The participants of this study were three students with EBD. These students with

EBD were selected based on the following criteria: (a) were identified as a student

receiving special education services under the eligibility code of emotional disturbance,

(b) had social skill development as an area of need on their IEP, (c) could benefit from

learning how to share, give compliments, and display sportsmanship in peer interactions

based on school psychologist and program therapist observation, and (d) had parent

consent to participate. All students in the special education class who fit the criteria were

recruited and any student who needed the intervention received it. The first three students

to return consent forms were chosen for the purpose of data collection in this multiple

baseline design research study.

Peer models from the general education classroom setting also participated in this

study. These students were selected based on the following criteria: (a) teacher reports of

a student being a positive role model, (b) had good attendance record, (c) were in the

same grade as the participants with EBD, and (d) had parent consent to participate.

Fourth and fifth grade general education teachers were given a researcher-created

checklist (see Appendix A) to assist in the identification of students as peer models for

this intervention. Teachers were asked to complete the checklist on four to six students they feel are appropriate for the intervention. Teachers gave the completed checklist to the school psychologist who then sent consent forms to the parents. The first three students to return a consent form were selected to participate in the study.

Intervention

The social skills intervention in this study was adapted from Skillstreaming for the Elementary School Child (McGinnis & Goldstein, 1997), and used role-playing, dialogue, and practice with the participants to increase frequency of compliment giving, sharing, and sportsmanship behaviors across all participants. These skills were drawn primarily from the friendship making skills section of the curriculum.

Independent variable. The independent variable in this study was the peer-mediated social skills intervention adapted from Skillstreaming the Elementary School Child (McGinnis & Goldstein, 1997). The intervention employed the following structure. First, all participants, including typical peers met at the assigned room and started the session off with a meeting. During the meeting, all participants sat in a circle on the floor. Second, norms of the group were explained and discussed. The norms included guidelines on taking turns speaking, being respectful of others, and speaking only when you have the talking stick in hand. Third, the researcher explained the target social skill. The steps for each skill were discussed and participants were asked questions on why each skill was important, and an example of when they had seen or displayed this behavior. Finally, participants engaged in role-play and practiced using the target skill.

The steps for sharing were as follows:

1. Decide what you want to share. In this step, a brief discussion took place on how another person may feel if you do or don't share with them.

2. Decide on the person with whom you want to share.

3. Choose a good time and place to share. A description of an appropriate time to share was given. Examples included when another person needs or would enjoy using something that the student possesses.

4. Offer to share in a friendly and sincere way. Body language, voice tone, and facial expression associated with sincerity was discussed.

5. Role play and practice how to share with your peers.

The steps for compliment giving were as follows.

1. Decide whether you want to compliment someone's appearance, behavior, or achievement. During this step, the primary researcher discussed the different types of things that participants may want to compliment someone on, such as appearance, behavior, or an achievement. In this step, participants received examples of compliments.

2. Decide who you want to compliment.

3. Choose a good time and place. A brief description about an appropriate time and place to compliment was given. For example, an appropriate time would be during free time when the other person is not busy.

4. Give the compliment in a friendly way. Emphasis was placed on giving the compliment in a sincere way. A brief discussion took place on body language and facial expressions associated with sincerity.

5. Role play and practice how to compliment with your peers.

The skill of sportsmanship was presented in the five steps below:

1. Decide what words or actions you will use to express encouragement. During this step, the primary researcher discussed the different types of things that participants may want to consider, such how they are feeling, how the other person may be feeling, and what things to say whether you win or lose. Displaying sportsmanship was explained as offering encouragement to others.

2. Decide who you will show encouragement to. In this step, participants received examples of how to display sportsmanship, such as keeping negative comments to a minimum, losing gracefully, and also how to win gracefully.

3. Choose a good time and place. A brief description about an appropriate time and place to display sportsmanship was given. For example, an appropriate time would be during breaks in the activity, or at the very end.

4. Display sportsmanship in a friendly way. Emphasis was placed on displaying sportsmanship in a sincere way. A brief discussion took place on body language and facial expressions associated with sincerity.

5. Role play and practice how to display sportsmanship with your peers.

Each skill came with a visual support in the form of a diagram. Each diagram included a description of each step along with a picture that served as a representation of the step. Students were verbally reinforced for participation during each step of the intervention. After the instruction was complete, students were directed to play basketball. The intervention lasted for a total of 15 minutes for the discussion, role-play,

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and practice, and had 15 total sessions of explicit social skills instruction. Following this, students were observed for nine minutes in the sports activity (basketball), and one minute afterwards, to give them an extended opportunity to display target skills of sharing, complimenting, and sportsmanship. During this ten-minute period, data were recorded on the dependent variables.

Dependent variable. The dependent variables in this study were sharing, complimenting, and displaying sportsmanship which were recorded as frequency of occurrence on a data collection sheet. In the context of this study, sharing involved passing the ball between teammates, and was operationally defined as willingly passing the basketball (by throwing) to another person within 15 seconds of receiving the ball, adapted from the definition by Merriam-Webster Open Dictionary as "to partake of or use with others" (Merriam Webster Open Dictionary, 2019). This meant, that during the activity, the pass was made in a respectful manner for it to qualify as an occurrence of sharing. The pass was thrown into another participant's arms or legs depending on the sport, and not at their head, or with the intention to hurt the other person. Unintentional passes to teammates were not counted as occurrences of sharing. For example, if the ball bumped into a participant and ended up in the arms of another participant, this would be considered an unintentional pass, and would not be an example of sharing. This intervention included sports as the activities for participants to display target skills, so in the context of sports, once the student receives the ball, he or she must pass it to another participant in order to keep the game moving.

Compliments in the context of this study, are operationally defined as any positively worded statement made towards someone else (Merriam Webster Open Dictionary, 2019). This included positive words, positive gestures such as the thumbs up gesture, or any other kind words directed from the student to another person. These compliments could be made to other peers or to adults supervising. During the sports activity, compliments could range from a thumbs up, to verbally saying "nice pass" or "great shot." Compliments could occur at any time during the 10 minutes of observation. Neutral words such as "okay" or "alright" were not counted as compliments.

Sportsmanship in the context of this study was operationally defined as words or actions of encouragement, or conduct such as fairness, respect for one's opponent, and graciousness in winning or losing (Merriam Webster Open Dictionary, 2019). Sportsmanship was displayed by the following behaviors: congratulating the winning team, consoling the losing team, helping a participant that has fallen or is hurt, offering verbal encouragement or words of consolation, or engaging in appropriate physical contact such as high-fives or fist bumps during and after games. During the activity, sportsmanship would be counted if one participant helped someone up after they had fallen, or if after the activity, they congratulated the winner or comforted the loser. Eye contact or head-nods without words of encouragement with opponents or teammates after the game were not counted as occurrences of sportsmanship.

Data were collected using a frequency count. Data was collected for nine minutes in the sports session, and 1 minute of wrap-up after, for opportunities to show target skills for a total of ten minutes per session. Data sessions were timed using a standard cell

phone timer. After nine minutes had elapsed the timer rang, indicating the end of the

game. After this, data were collected for one more minute, again through a cell phone

timer, to give the students an opportunity to display the target skills at the conclusion of

the game. At this point, the participants were prompted to hand the ball to researchers,

and line up.

Materials

The activities used in this research study included two 9-foot hoops, which were used

as the baskets for students to shoot the ball. A standard adult basketball was used during

these data collection sessions. A standard classroom was used for the discussion, role-

play, and practice portion of the intervention. The classroom was equipped with desks,

chairs, and a whiteboard. There was enough room in the assigned setting to stand up and

do some role-playing activities. A laptop and a projector were used to project

supplemental pictures or images related to the skill being taught on the whiteboard or

projection screen.

Measurement Instruments

The measurement instrument to be used in this study was a frequency data sheet (see

Appendix B). Each data collector recorded the frequency of compliments, sharing, and

sportsmanship for the participant they observed using a tally mark on the data sheet. The

data sheet had rows for the days that sessions were held and a separate column for each

dependent variable. Tally marks went inside the allotted cell for each occurrence of

sharing, compliments, and sportsmanship during that session. Each data collector took

data on one participant, and the fourth data collector alternated the collection of data between participants for purposes of inter-observer agreement (IOA).

Validity. To increase validity of the measurement instrument, the data sheet was examined by expert data collectors, such as behavior therapists and school psychologists, to verify correct formatting, and to confirm that the data sheet was the most accurate instrument for this type of data collection. The data sheet was piloted during the training of the data collectors and revised based on their feedback.

Reliability. Reliability of the data was achieved by having multiple data collectors collecting data on the same participant to establish IOA. IOA was calculated using the formula, number of agreements divided by number of agreements plus disagreements. Four data collectors were used during the intervention and consisted of three trained paraeducators and the researcher. Each of the first three data collectors collected data on one participant throughout the study, while the fourth data collector collected data on a different participant each day for the purpose of establishing reliability (i.e., inter-observer agreement) of the data.

Data collectors were trained to collect data on the target behaviors before the study began. The training occurred in an empty classroom a week before the baseline phase of the intervention began, and included in depth explanations of the three target skills. Examples of appropriate displays of the respective skills were presented and practiced. Next, non-examples were also explained and clarified. Adults role-played various scenarios involving the dependent variables while the data collectors practiced collecting

data for a shortened period of time (3-5 minutes). Training continued until observers

reached 90% inter-observer agreement (IOA).

Treatment fidelity. To ensure fidelity in implementation of the intervention, a

researcher-created fidelity checklist was made by the researcher and employed in the

intervention (see Appendix C). On each day of the intervention, one of the trained data

collectors completed the checklist as the researcher delivered the intervention, by

checking off when each step of the intervention had been delivered in the correct order.

The researcher and trained data collector reviewed the fidelity checklist each day and

discussed any discrepancies.

Social validity. When delivering interventions to students with EBD, it is important

for the researcher to establish that the skills being taught in the intervention are important

for the participant (Wolf, 1978). Social skills are an area of deficit for students with EBD,

so effective interventions may help alleviate some of the difficulties these students

experience in their educational and adult lives (Gresham et al., 2004). Considering the

role that social skills play in a child's ability to develop relationships, produce

satisfactory school adjustment, and develop coping strategies to adapt to social demands

(Gresham et al., 2006), it is important to examine interventions for social acceptance. The

counselor and school psychologist validated that the skills being introduced to the

participants in this intervention were socially acceptable and important for their improved

peer relationships. This was done by reviewing IEP information and areas of need for the

students, as well as through observations. In addition, participants were asked to rate

themselves on these skills before and after their participation in the intervention using the researcher-created rating scale (see Appendix D).

Procedure

Participants were recruited from a special education classroom for students with Emotional and Behavioral Disorders. The psychologist and counselor reviewed IEPs and classroom data to identify potential participants with EBD; the primary researcher was not a part of this process. Once participants were identified, recruitment letters were sent home in sealed envelopes in the backpacks of students who fit the criteria, to inform parents about the study. After the parents had 3-4 days to familiarize themselves with the study, the school psychologist made a phone call home to answer questions about the study and request consent. The signed consent forms were brought back by the parents of the students, or by the students themselves. The psychologist was the person of contact in case parents had any questions about the study. The first three students to return the consent form were a part of data collection for the research study, however every student who needed the intervention received it.

Peer models from the general education classroom setting also participated in this study. Four to six general education students, identified by the general education teacher using a teacher checklist, were recruited for participation as role models in the study. Information about the study was sent home to parents of these students. The letters went home in the students' backpacks. The first three general education students with parent permission participated as the peer models. Data collectors were trained to collect data on the target behaviors before the study began. Once all participants had been identified,

participants completed the social validity survey before the intervention, to check for social validity.

Baseline procedures. During the baseline phase, participants and typical peers did not receive any instruction on social skills. They simply met in one room to be introduced to each other, and were given instructions before participating in a game of basketball. Once they were given the instruction "time to play" all participants and data collectors headed out to the play area. Data collectors positioned themselves around the play area, and handed the ball to the participants. Data collection for target skills began once the ball was in play. After nine minutes of game play, and one minute of continued observation, the session ended. Data was collected by researchers as the students played, and data was noted on a frequency data sheet.

Intervention procedures. The intervention took place in a classroom with the researchers, students with EBD, and peer-models that were chosen to participate from the general education classes. These peer models served as examples for the students with EBD through baseline and intervention phases of the study. The intervention consisted of discussions and role-play activities. The intervention sessions were immediately followed by a nine-minute game of basketball, where the students were observed. Students were brought to the activity area, and got the instruction, "time to play" by the researchers. Researchers again collected data to check for the occurrence of compliments, sharing, and sportsmanship. Prior to beginning the activity, researchers took their positions around the play area so they could maximize their ability to see and hear the participants. After each data collector was appropriately positioned, the participants were given a ball. Data

collectors began data collection once the ball was in play for the first time and continued for 10 minutes; 9 minutes of actual game-play, and one minute of extended data collection.

Generalization. Two weeks after the last day of maintenance, the study moved into the generalization phase. The participants with EBD and the typical peers were brought together for an activity in a new setting without first reviewing the steps of sharing, complimenting, and sportsmanship with others. The objective of this phase was to determine whether the participants could generalize the behavior to lunch recess in the absence of the intervention. Similar to the baseline phase, students did not receive any instruction on target skills during this phase of the intervention. Once all participants made it to the designated meeting spot, researchers positioned themselves around the play area, and then gave the participants the ball. Once the ball was in play for the first time, data collection began. After 10 minutes of data collection, researchers ended data collection and let the participants continue on in their activities.

Confidentiality

The current study was approved by the Institutional Review Board of San Jose State University. Confidentiality was maintained through-out the study by protecting the identity of the students whenever their names were written. Pseudonyms were used when addressing them in the write-ups of results. Personal information about the students was kept confidential, and only relevant and pertinent information about the student was written. All efforts were made to keep the identity of the student safe and private. Data sheets were kept in a locked cabinet when not in use. Information was not shared with

individuals outside of the study, and all data collectors were trained in the procedures of confidentiality.

Risk/Benefits to Participant

The risk to the participant was minimal in this study, however there was still some level of risk involved. Participants may have experienced frustration or anxiety related to engaging in the new intervention in the presence of typical peers. To reduce this risk, participants were allowed to take a break from the activities if needed. As with all research, there was also the risk of loss of confidentiality. To mitigate those risks pseudonyms were used and information related to the study, including data sheets, were kept in a locked cabinet when not in use.

The benefit of this study was that participants with EBD received the opportunity to acquire positive social skills and see how peers treated them when they engaged in appropriate social interactions. Students participating as typical peer role models may have benefitted from increased self-esteem when modeling appropriate social interactions and engaging with diverse peers. Indirect benefits included contributing much needed information to the field of special education about the effect of peer-mediated social skills interventions on elementary students with EBD.

Data Analysis

The data from this study was analyzed using visual analysis which allowed for a comparison of data across conditions as appropriate to single-case design (Horner et al., 2005). Using visual analysis, data was examined for stability, trends, and magnitude of change across conditions. Effect size was calculated using the percent of all data

remaining after removing the minimum number of data points which would eliminate all

data overlap between phases A and B (Parker, Hagan-Burke, & Vannest, 2007)

Chapter Four: Results

The purpose of this study was to measure the effect of a peer-mediated social skills intervention on fourth and fifth grade students aged 9, 10, and 11 with emotional behavioral disorders in a public-school setting. The current study proposed to explicitly teach students the target social skills of sharing, complimenting, and sportsmanship. Research suggests that sharing is an important interpersonal skill (McDaniel et al., 2017) and that giving compliments increases a person's likeability and chances of creating healthy relationships (Cialdini, 1993; Knapp et al., 1984). A number of studies have explored the importance of sportsmanship in the larger set of social skills, (Samalot & Poretta, 2013), and curriculums such as Appropriate Sport and Game Behaviors (Moore et al., 1995) have been developed to address this need. Through effective social skills instruction, the expected outcomes of this study included an immediate increase in instances of sharing, complimenting, and sportsmanship.

The study followed a multiple baseline across behaviors research design allowing for comparison of data on the dependent variables across baseline and intervention phases. Peer-models were chosen to participate from age-matched general education classrooms at the school site. These peer models served as examples for the students with EBD through baseline and intervention phases of the study. During the baseline phase, students were observed participating in the activity without any prior social skills instruction.

During the intervention phase of the study an adapted version of Skillstreaming for the Elementary School Child (McGinnis & Goldstein, 1997) was used as the intervention,

incorporating role-play, dialogue, and practice with the participants to increase frequency of sharing, complimenting, and sportsmanship. Intervention sessions took place in a classroom with the researchers, students with EBD, and typical peers. The intervention sessions were immediately followed by nine minutes of game play outdoors, where students played basketball, and one minute of wrap-up. Researchers collected data to check for the occurrence of sharing, complimenting, and sportsmanship.

During the maintenance phase of this study, there was no explicit social skills instruction, rather participants with EBD and typical peers continued to play basketball together on the playground during the same designated time period used for the intervention phase. Researchers collected data on the dependent variables just the same as in the baseline and intervention phases. This maintenance phase lasted five days.

A generalization phase took place two weeks after the maintenance phase on the playground during regular school recess to assess for generalization of the skills learned in the intervention phase. During recess, participants with EBD would gather at the basketball courts with their nondisabled peers. Adult recess monitors generally tried to distribute students across all basketball courts and aimed to assure that all students had an opportunity to play. If three typical peers did not gather on the same court with the participants with EBD, adults would ask a group of students if they wanted to join to even out the players on all of the courts. On two of the three generalization days, two peer models who had participated in the intervention, self-selected to join the participants with EBD. If there were any remaining spots for the peer models, researchers would ask

other typical peers if they'd like to join until someone accepted. Using this process there were always three typical peers playing basketball with the three participants with EBD.

The current chapter presents a review of the data collected in this study. Data from the baseline, intervention, maintenance, and generalization phases were analyzed in order to identify trends in the data. Visual analysis and descriptive statistics were used in order to determine the effectiveness of the curriculum on the social competence of the students with EBD as measured by the three target skills.

Data Analysis

Data were analyzed to look for a change in occurrences of sharing, complimenting, and sportsmanship from baseline to intervention phases. The researcher used visual analysis to compare data across phases, looking for increases in target behaviors, and levels of change between conditions. Descriptive statistics were also used to compare means across conditions. See Table 1 for means and standard deviations for all participants across all conditions. In addition, percentage of all non-overlapping data (PAND) was used as an estimate of effect size of the intervention. PAND is defined as the percent of all data remaining after removing the minimum number of data points which would eliminate all data overlap between phases A and B (Parker, Hagan-Burke, & Vannest, 2007). PAND data was most appropriate for this type of study due to the presence of outliers, common in single case designs, that present a skewed image of the final results. PAND scores are interpreted as the following: 0.00-0.65 shows a weak effect, 0.66-0.92 shows a medium effect, and 0.93-1.00 shows a strong effect of the

intervention (Schneider, Goldstein, & Parker, 2008). PAND scores for the present study

ranged from 0.53 to 0.95.

Table 1

Frequency of Target Skills for All Participants Across All Conditions

Participant	Baseline		Intervention		Maintenance		Generalization	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
John								
Sharing	2.20	1.48	6.80	3.03	5.20	2.60	3.00	2.00
Compliments	0.10	0.30	0.80	0.83	0.50	1.26	0.30	0.57
Sportsmanship	0.80	1.01	1.80	2.16	0.40	0.54	0.30	0.57
David								
Sharing	2.20	2.38	6.80	3.41	5.60	2.94	4.60	0.57
Compliments	0.10	0.33	2.60	1.50	1.40	0.96	0.60	0.57
Sportsmanship	1.30	1.42	3.20	2.04	1.40	1.51	0.60	0.57
Albert								
Sharing	2.60	1.14	4.00	1.22	5.06	1.98	1.60	1.52
Compliments	0.20	0.42	1.40	2.07	0.46	1.25	0.30	0.50
Sportsmanship	0.40	0.63	4.60	2.07	3.20	2.00	3.00	1.40
All Participants								
Sharing	2.33	1.66	5.86	2.55	5.28	2.50	3.06	1.36
Compliments	0.13	0.35	1.60	1.46	0.78	1.15	0.40	0.54
Sportsmanship	0.83	1.02	3.20	2.09	1.66	1.35	1.30	0.84

Inter-observer Agreement

To establish reliability of data collected during this study, four data collectors were

trained to collect data. Each of the three participants had their own data collector, and a

fourth data collector rotated between the three participants, collecting reliability data on

one participant at each session. Thus, reliability data was collected for 33% of the data

points for each participant. Reliability was established using inter-observer agreement

(IOA). IOA was calculated by taking the number of agreements between the independent

observers, and dividing by the total number of agreements plus disagreements. This data

was then multiplied by 100 to come up with a percentage. (See Table 2 for the IOA for each participant).

IOA percentages in this study reflect a high level of agreement. This high level of agreement may be indicative of the relatively low occurrences of the dependent variables. In addition, data collectors were standing in close proximity to each other and may have unknowingly affirmed the data they collected by seeing the other data collector mark their data sheet. During the course of the intervention, one of the data collectors needed a refresher on what context within which to collect data on compliments and sportsmanship. For example, there was a question about whether a high-five after a scored basket would be considered a compliment, or sportsmanship, so that retraining was provided during the intervention.

Table 2

Inter-observer Agreement for all Skills

Participant	Baseline	Intervention	Maintenance	Total
John				
Sharing	100%	95%	100%	98.3%
Compliment	100%	100%	100%	100%
Sportsmanship	100%	100%	100%	100%
David				
Sharing	100%	100%	95%	98.3%
Compliment	100%	100%	100%	100%
Sportsmanship	95%	100%	100%	98.3%
Albert				
Sharing	100%	100%	100%	100%
Compliment	100%	100%	100%	100%
Sportsmanship	100%	95%	100%	98.3%

Analysis Related to the Research Questions One, Two, and Three

There were three research questions examining each of the three dependent variables: sharing, compliments, and sportsmanship. In the following section, data will be presented

in a narrative fashion by participant for each of the three skills. Then, the data for all three dependent variables will be presented graphically for each participant.

Participant one. John was an 11-year old boy in the fifth grade. He was a proficient reader and comprehended at a level appropriate for his age. He struggled with mathematics and was working on multiplying single digit numbers. Socially, John engaged in disruptions inside the classroom and had a hard time maintaining his friendships. He regularly engaged in physical altercations with his peers inside and outside of class. He was working on creating and maintaining healthier relationships. To encourage positive behaviors in his setting, the classroom staff setup a class-wide behavior management plan which incentivized on-task and prosocial behaviors. Aside from the teacher in the class, John worked with two para-educators, a behavior assistant, and went to therapy with the program therapist.

Sharing. During the baseline phase for the first skill of sharing, John's occurrences of sharing ranged from zero to 4 instances per session. See Figure 2 for a graphic display of all of John's data (including compliments and sportsmanship). He showed a slight increase in sharing on day two, followed by a decrease in occurrences in the subsequent days. On the final day of baseline John displayed zero occurrences of sharing. Overall, John displayed few instances of sharing during the baseline phase ($M = 2.20$; $SD = 1.48$).

During the intervention phase John's occurrences of sharing ranged from 2 to 10 instances per session. With the implementation of the intervention John displayed an immediate change in data going from zero occurrences of sharing in baseline to eight occurrences of sharing on the first day of intervention. John's occurrences of sharing

increased overall with the introduction of the intervention ($M= 6.80$; $SD= 3.03$). John

displayed few overlapping data points with the baseline phase and an effect size estimate

suggests a medium effect of the intervention on John's sharing skills (PAND = 0.90).

After five days of intervention John was moved into the maintenance phase. In the

maintenance phase, occurrences of sharing ranged from 1 to 11 instances per session.

John's overall occurrences of sharing in maintenance remained higher than baseline ($M=$

5.20; $SD = 2.60$) though there was some degree of variability in this phase. An estimate

of effect size through the maintenance phase suggests a medium effect of the intervention

(PAND = 0.80) on John's sharing skills.

Complimenting. During the baseline phase for the second skill of complimenting,

John's occurrences ranged from zero to one instances of complimenting per session. John

started with zero occurrences of sharing and remained at zero until day six where he

showed one occurrence of complimenting. John did not display any occurrences of

complimenting in the subsequent days. Overall, John's display of complimenting was

very low during the baseline phase ($M = 0.10$; $SD = 0.30$).

During the intervention phase John's occurrences of complimenting ranged from zero

to two instances of complimenting per session. With the implementation of the

intervention John displayed a change in data going from zero occurrences of

complimenting on the last day of baseline, to two on the first day of intervention. The

remainder of the intervention phase John's occurrences of complimenting alternated

between zero and one occurrence ($M= 0.80$; $SD= 0.83$). An effect size estimate indicates

a medium effect of the intervention on John's complimenting skills (PAND = 0.80).

In the maintenance phase, occurrences of complimenting improved to four instances per session on day two of this phase. Following this session complimenting remained low (M= 0.50; SD = 1.26) and an effect size estimate through the maintenance phase suggests a weak effect of the intervention on John's complimenting behaviors (PAND =0.56).

Sportsmanship. For the skill of sportsmanship, the data revealed that John had a number of occurrences of sportsmanship during the 15 days of baseline. The range of data during this phase was from zero to three instances of sportsmanship per session. However, given the length of the baseline phase and the number of days with zero occurrences of sportsmanship, this skill remained low overall (M=0.80; SD= 1.01).

Once the intervention was introduced, John displayed an immediate increase in sportsmanship with five occurrences on day one of this phase. The range of data during the intervention phase was from zero to five occurrences of sportsmanship per session. The mean occurrences of sportsmanship increased from the baseline to intervention (M=1.80; SD= 2.16), however, there was considerable overlapping data between the baseline and intervention phases. An effect size estimate suggests a weak effect of the intervention on John's sportsmanship skills (PAND= 0.55).

When John was moved into the maintenance phase, he showed a range of occurrences of sportsmanship from zero to one per session, with overall occurrences in this phase decreasing from the intervention phase (M= 0.40; SD= 0.54). An effect size estimate through the maintenance phase indicates a weak effect of the intervention on John's sportsmanship skills (PAND=0.53).
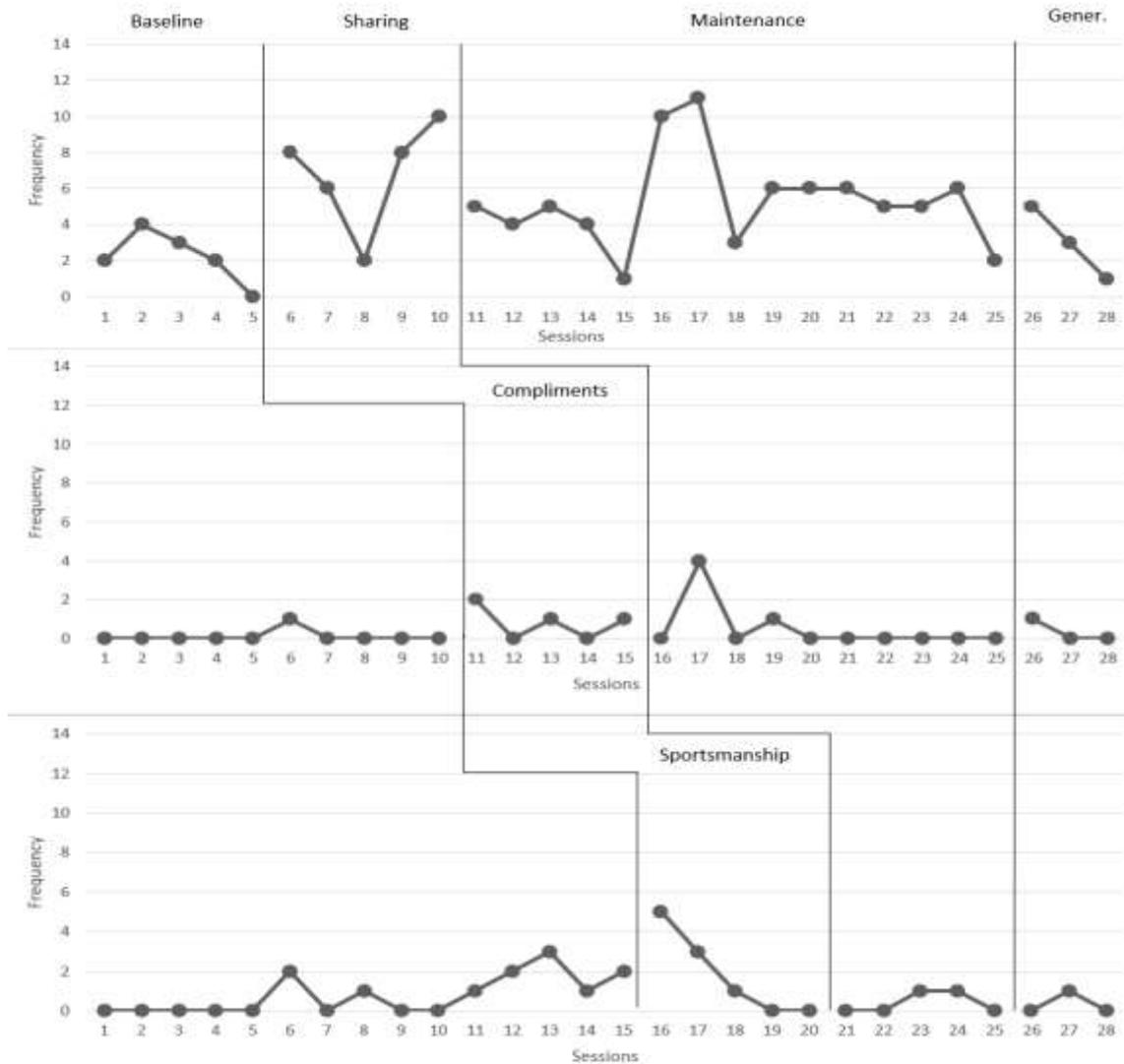
Figure 2. Frequency of John's occurrences of target skills by phase and session.

Participant two. David was an 11-year-old boy in the fifth grade. His reading and math skills were slightly below grade level, though his participation in all academic subjects was the highest in the class. He showed enthusiasm when finding and answering questions. Socially, David struggled to follow directions and be respectful of staff. He refrained from physically fighting with his peers, but regularly engaged in verbal disputes

with both staff and his peers. The teacher, para-educators, and behavior assistant were working with David to find strategies that helped him manage his emotions. He was seeing a program therapist once a week for individual therapy, and went to group therapy sessions once a week as well. In his program, there were three full-time staff members for the eight students in the class, with other support staff joining on an as-needed basis.

Sharing. During the baseline phase, David had a wide spread of occurrences of sharing, ranging from zero to six instances per session. See Figure 3 for a graphic display of all of David's data (including compliments and sportsmanship). During the first day of baseline, David had six occurrences of sharing. On subsequent days however, occurrences of sharing decreased to zero, and remained low for the remainder of the phase (*M*=2.20; *SD*= 2.38).

In the intervention phase, David's occurrences of sharing increased over baseline, ranging from zero to 12 instances of sharing per session. On the first day of intervention, occurrences of sharing dropped to zero, and then increased on day two, to four occurrences and again on day three to 12 occurrences of sharing. The occurrences of sharing remained high for the remainder of the intervention phase (*M*=6.80; *SD*= 3.41). An effect size estimate suggests a medium effect of the intervention on David's sharing skills (PAND=0.70).

The occurrences of sharing during the maintenance phase also ranged from 1 to 12 instances per session. Overall, the occurrences of sharing were higher during this phase (*M*= 5.60; *SD*= 2.94) than the baseline phase, though they were slightly less than the

intervention phase. An effect size estimate through the maintenance phase indicates there was a medium effect of the intervention on David's sharing skills (PAND=0.84).

Complimenting. In looking at the second dependent variable, David displayed few occurrences of complimenting during the baseline phase. Specifically, there were zero occurrences of complimenting during the 10 days of baseline, aside from one occurrence on day eight (*M*= 0.10; *SD*=0.33). The data showed that this skill remained low and stable for David.

With the introduction of the intervention David displayed an immediate jump in occurrences of complimenting to two occurrences. During the intervention phase the range jumped from 1 to 5 occurrences of complimenting per session. As represented by the increase in range, John showed increases in the overall occurrences of compliments in this phase (*M*= 2.60; *SD*= 1.50). An effect size estimate indicates a strong effect of the intervention on David's complimenting behaviors (PAND=0.93).

When moving to the maintenance phase, occurrences went down slightly, with complimenting ranging from zero to three instances per session. The average number of occurrences during this phase also decreased (*M*=1.40; *SD*= 0.96). An effect size estimate through the maintenance phase suggests a medium effect of the intervention on David's complimenting skills (PAND=0.88).

Sportsmanship. The final dependent variable was sportsmanship. The range of occurrences of sportsmanship for David during the baseline phase was from zero to four instances per session. The overall occurrence of sportsmanship for the baseline phase was low (*M*=1.30; *SD*= 1.42).

With the introduction of the intervention there was an immediate jump to five occurrences of sportsmanship. During the intervention phase, David's occurrences of sportsmanship ranged from zero to five instances per session demonstrating an overall increase in sportsmanship during this phase (*M*=3.20; *SD*= 2.04). An effect size estimate of this phase however indicates a weak effect of the intervention on David's sportsmanship skills (PAND=0.60).

When looking at the maintenance phase, the range of occurrences of sportsmanship decreased to zero to three instances per session. The mean occurrences of sportsmanship decreased during this phase (*M*=1.40; *SD*= 1.51), and an effect size estimate through the maintenance phase suggests a weak effect of the intervention on David's sportsmanship skills (PAND=0.60).
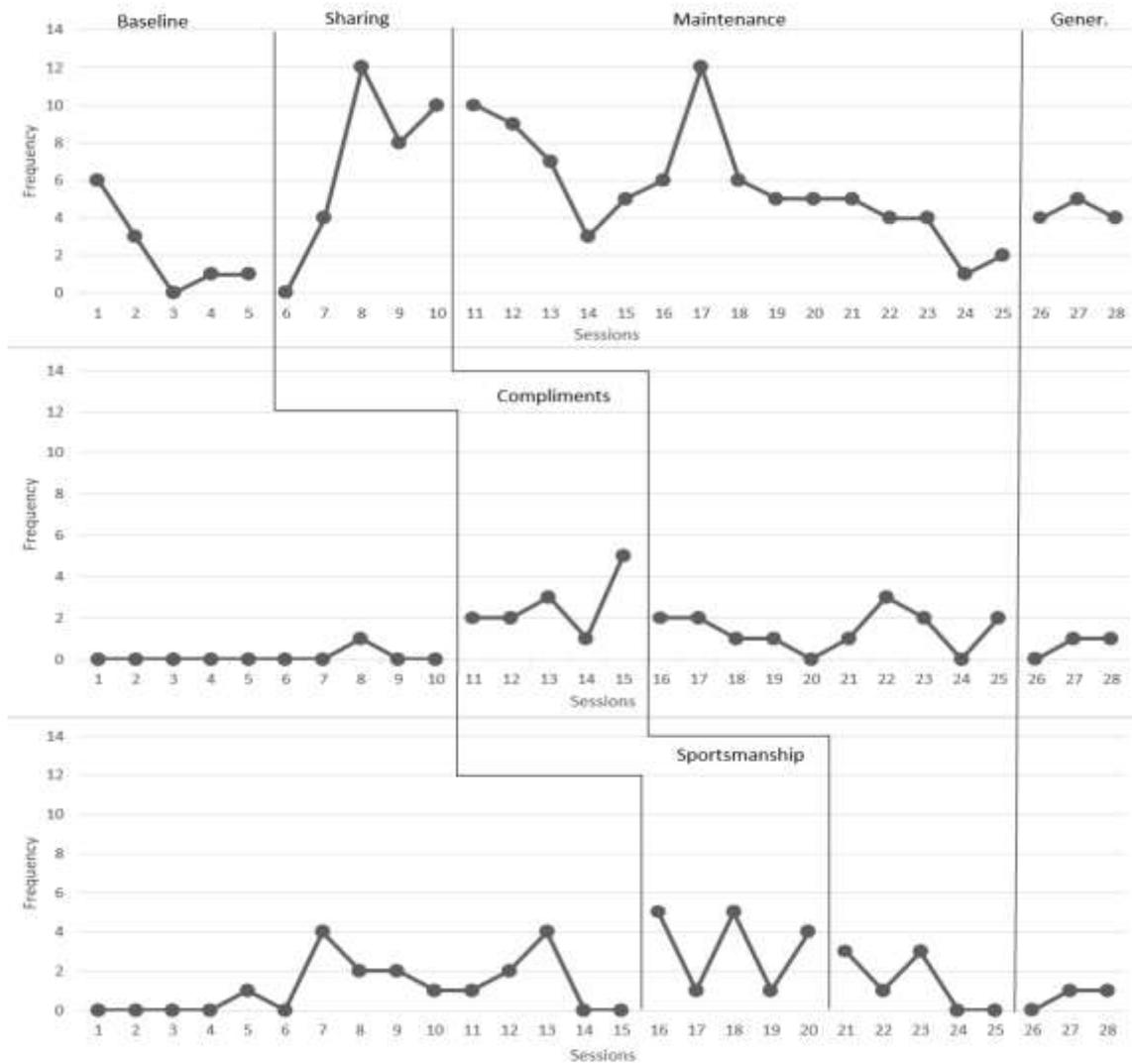
Figure 3. Frequency of David's occurrences of target skills by phase and session.

Participant three. Albert was an 11-year-old boy in the fifth grade. He was

proficient in both reading and mathematics. Socially, Albert engaged in disruptions inside

the classroom, and had a hard time maintaining his friendships. He had a difficult time

controlling his impulses and regularly threw things inside and outside of the classroom.

He got into verbal arguments with staff and students and also physically fought with his

peers. He was working with his teacher and para-educators to find strategies to control

his impulses. He was motivated by the classroom management plan which rewarded positive behavior, and he enjoyed earning tangible reinforcements, such as toys and playdough. He asked for breaks where he would take walks or run laps outside around the playground area, and this was something that provided him with an outlet to exert his physical energy.

*Sharing***.** Albert worked on the same three skills, and on the same timeline as the other two participants, John and David. Albert did display a few occurrences of sharing during the baseline phase. See Figure 4 for a graphic display of all of Albert's data (including compliments and sportsmanship). The range of occurrences of sharing by Albert during the baseline phase was from 1 to 4 instances per session, though he showed a downward trend in occurrences after the second day of baseline (M=2.60; SD= 1.14).

With the introduction of the intervention Albert's sharing behaviors showed an immediate jump to six occurrences. During the intervention phase, the range of sharing behaviors increased from 3 to 6 occurrences per session. Albert's overall averages also increased from the baseline phase (M=4.00; SD= 1.22). An effect size estimate suggests a medium effect of the intervention on Albert's sharing behaviors (PAND=0.70).

During the maintenance phase Albert displayed a greater range in sharing behaviors with occurrences ranging from 2 to 8 per session. The overall data reflected an increase over the intervention phase (M=5.06; SD= 1.98). An effect size estimate through the maintenance phase suggests a medium effect of the intervention on Albert's sharing behaviors (PAND=0.84).

Complimenting. The next dependent variable was complimenting. Albert's data for

the skill of complimenting remained consistent throughout the baseline phase. The range

of data collected during the baseline phase for the skill of complimenting for Albert was

from zero to one instance per session (M=0.20; SD= 0.42).

During the intervention phase, the range increased from between 0 to 5 occurrences

of complimenting per session with data gradually improving across this phase. On the last

day of intervention, Albert had his highest day with five occurrences of complimenting,

increasing the average for this phase (M=1.40; SD= 2.07). An effect size estimate

suggests a medium effect of the intervention on Albert's complimenting behaviors

(PAND=0.73).

Upon moving into the maintenance phase Albert displayed an immediate drop in

occurrences of complimenting. The range of occurrences of complimenting was from

zero to four instances per session (M=0.46; SD= 1.25). An effect size estimate through

the maintenance phase suggests a weak effect of the intervention on Albert's

complimenting behaviors (PAND=0.60).

Sportsmanship. For the final dependent variable of sportsmanship, Albert showed

low occurrences throughout the baseline phase. The range of occurrences during the

baseline phase for the skill of sportsmanship for Albert was from zero to two instances

per session. The overall occurrences remained stable and low during this phase (M=0.40,

SD= 0.63).

With the introduction of the intervention Albert displayed an immediate jump in

occurrences of sportsmanship behavior, with five occurrences on day one. During the

intervention phase, the range of sportsmanship behaviors increased from 2 to 7 occurrences of sportsmanship per session. Albert showed an increased display of sportsmanship during this phase (*M*=4.60; *SD*= 2.07). An effect size estimate indicates a strong effect of the intervention on Albert's sportsmanship behaviors (PAND=0.95).

Upon moving into the maintenance phase, the range of occurrences widened from zero to eight per session. The first day of this maintenance phase brought the highest occurrences of sportsmanship from Albert with eight occurrences that session. However, occurrences of sportsmanship decreased on subsequent days (*M*=3.20; *SD*= 2.00). An effect size estimate through the maintenance phase still suggests a strong effect of the intervention on Albert's sportsmanship skills (PAND=0.92).
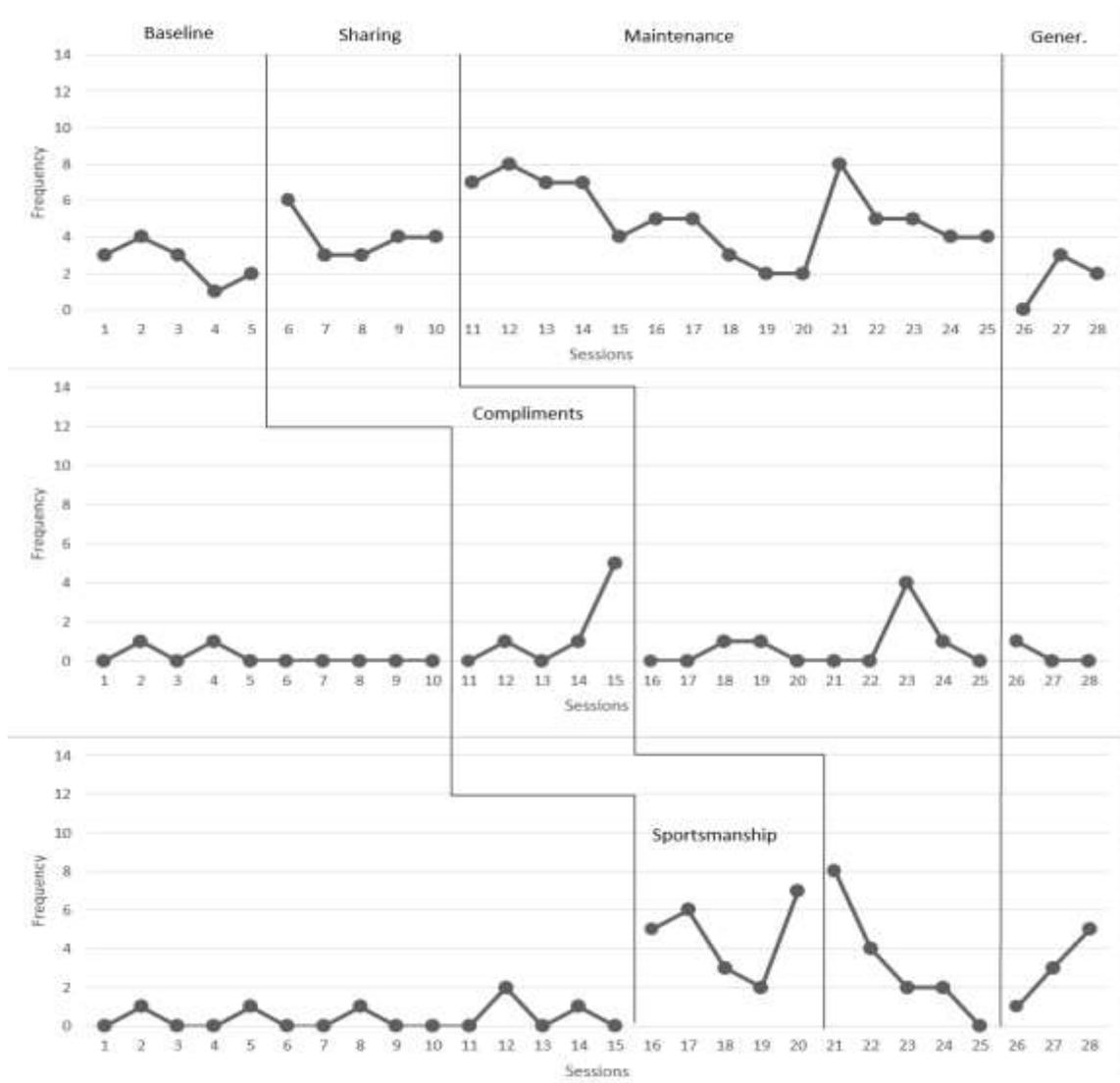
Figure 4. Frequency of Albert's occurrences of target skills by phase and session.

Analysis Related to Research Question Four

The fourth research question in this study explored the effect of the intervention when applied to a setting separate from the one that the participants originally took part in. The objective of including this question was to analyze the effect of the intervention by examining data from the generalization phase. These results will be explored below, by participant, similar to the sections above.

John. The first target skill in this study was sharing. During the generalization phase, John showed a downward trend starting with five occurrences of sharing on the first generalization probe and ending with one occurrence of sharing on the last generalization probe. For this phase overall instances of sharing were slightly higher than baseline ($M = 3.00$; $SD = 2.00$) indicating John's sharing skills generalized somewhat to the recess setting. For the second skill of complimenting, John's data suggested that his complimenting skills did not generalize to the recess setting, as the range of occurrences of complimenting during this phase was from zero to one ($M = 0.30$, $SD = 0.57$). Finally, for the last skill of sportsmanship, the generalization phase also showed a range from zero to one occurrence of sportsmanship per session. These data suggest that John was unable to transfer sportsmanship skills to the recess setting.

David. When analyzing the first target skill of sharing, the data showed that David had some success in applying this skill to a separate setting. During the generalization phase, David's occurrences of sharing ranged from 4 to 5 occurrences per session. The overall occurrences of sharing fell slightly from the maintenance phase ($M = 4.60$; $SD = 0.57$), but was still higher than baseline. These data suggest that David's sharing behaviors in the recess setting were similar to his sharing behaviors in the baseline and intervention setting.

For the second skill of complimenting, David's data showed that during the generalization phase, the occurrences of complimenting ranged from 0 to 1 instance per session ($M = 0.60$; $SD = 0.57$). These data suggest David did not fully generalize his complimenting skills to the recess setting. Finally, for the third skill of sportsmanship,

during the generalization phase, the range of occurrences of sportsmanship dropped for David, to a range of zero to one instances of sportsmanship behaviors per generalization session (*M*=0.60; *SD*= 0.57). Again, these data suggest that David's sportsmanship skills did not generalize to the recess setting.

Albert. Following the same pattern as the other participants, the first skill that Albert worked on was sharing. During the generalization phase, the range of occurrences of sharing for Albert was from 0 to 3 per session. For this phase overall instances of sharing were slightly lower than baseline (*M* = 1.60; *SD* = 1.52). These data suggest that Albert's occurrences of sharing behaviors in the generalization setting were similar to the baseline and intervention setting.

For the second skill of complimenting, during the generalization phase, the occurrences ranged from zero to one per session. These data suggest that Albert's complimenting behavior did not generalize to the recess setting. For the final skill of sportsmanship, when looking at the data from the generalization phase, the range of occurrences of sportsmanship was from 1 to 5 instances per session (*M*=3.00; *SD*= 1.40). These data suggest that Albert's sportsmanship skills did generalize to the recess setting, and beyond that, showed an increasing trend in the generalization setting. He was the only participant to show an increasing trend of this skill during the generalization phase.

Social Validity

Participants of the study were asked to rate themselves on the three target skills of the study. Specifically, they were asked to rate on a scale of 1-5 their knowledge of each skill (e.g., I know how to share) and their comfort level with using the skill (e.g., I am

comfortable sharing with others). For knowledge of sharing, two participants rated

themselves as a five and one participant rated themselves as a four prior to intervention.

All three participants rated themselves as a five after intervention. When asked about

comfort level with sharing, participants' ratings did not change from pre to post-

intervention; two participants rated themselves as four and one rated himself as five in

this area.

When looking at knowledge of complimenting, the first participant rated himself as

three both before and after the intervention, the second participant rated himself a four

both before and after intervention, and the final participant rated himself a four before the

intervention and a five after. For the second question on complimenting, regarding their

comfort level with complimenting others, all three participants rated themselves one full

point higher from three and four before the intervention to four and five after.

Finally, participants were asked about their sportsmanship skills. Participants were

asked if they knew how to display sportsmanship, with two participants rating themselves

at a three before the intervention and a four after. The third participant rated himself two

full points higher, from a two before the intervention to a four after the intervention.

When asked to rate themselves on their comfort in displaying sportsmanship scores were

noticeably lower. Two participants rated themselves at a two and one rated himself at a

three prior to the intervention. After the intervention ratings moved to three and four.

The results of the student self-report scores were similar to the data that researchers

collected during the basketball activity. The strongest skill that participants rated

themselves on in the survey was sharing, and the observational data showed that sharing

was also the most frequently occurring skill. Participants were less knowledgeable and less comfortable with giving compliments prior to the intervention but showed some improvement on post-intervention surveys. Likewise, the skill of sportsmanship was less familiar to participants at the beginning of the intervention, but their confidence and comfort level with sportsmanship went up at the conclusion of the intervention. However, sportsmanship remained lower than the other skills as no participants rated this skill as a five in either knowledge or comfort level. In general, what participants reported about themselves was also represented by the observational data collected.

Summary

This study examined the effect of a peer-mediated intervention on three social skills (sharing, complimenting, and sportsmanship behaviors) for students with EBD across baseline, intervention, and maintenance phases. Skills were also assessed in a generalization setting. Three participants, John, David, and Albert demonstrated improved sharing, complimenting, and sportsmanship behaviors in intervention phases, though effect size estimates indicate that effect of the intervention was not as strong for John.

John showed the most substantial progress in the skill of sharing. His occurrences increased during the intervention, and continued to be higher than baseline even through the generalization phase. Similar to John, David showed the greatest effect during the skill of sharing. His overall occurrences hovered at roughly the same levels, and all phases showed averages above the average during the baseline phase. Albert also showed the strongest effect while learning the skill of sharing. He managed to increase his overall

proficiency with this skill during the maintenance phase. All three participants showed steady increases in this skill.

Complimenting seemed to be the weakest of the three skills. John had only one occurrence during all of baseline, and though his occurrences increased, the improvements were very minimal. Contrary to John though, during the skill of complimenting, David seemed to respond well to the instruction. His occurrences increased substantially during the intervention phase, though they continued to fall slightly in the phases subsequent. Finally, aside from two days, Albert showed a small effect in the skill of complimenting. His maintenance and generalization data showed a similar level of proficiency with complimenting as during the baseline phase. Compliments showed the smallest effect size, with most participants showing similar level of proficiency in this skill as during the baseline phase.

The skill of sportsmanship showed mixed results. During intervention, John's occurrences of sportsmanship increased rapidly, but continued to fall as the phases went along. During generalization, his occurrences fell even below the baseline phase. David also showed mixed results in this skill. On two of the days during baseline, David had four occurrences of sportsmanship, and though this average increased in the intervention phase, the phases that followed showed similar data to baseline. Albert though, unlike David and John, was able to maintain and even generalize this skill. His overall data during generalization was similar to his data during the maintenance phase. For this target skill, only one of the participants was able to maintain and generalize the skill.

The social skill intervention was successful in increasing the overall frequency of the three target skills during intervention phases for all three participants, however skills tended to decrease as participants entered the maintenance phase. Furthermore, generalization of skills to the recess setting had limited success across all three participants.

Chapter Five: Discussion

This chapter presents the summary, limitations, discussion, and implications of the research study. The summary section provides an overview of the study, including the rationale, purpose, theoretical framework, research questions, methodology, and summary of the findings. The second section presents a discussion of the limitations of the study. The third and fourth sections discuss the findings and the implications for future research and practice. The chapter concludes with a final summary.

Summary of Study

Social skills deficits translate to low social competence for students with EBD, and this presents as a substantial obstacle in the path to academic and behavioral success (Lane et al., 2006; Kauffman & Landrum, 2009). Students with EBD have significant academic difficulties (Lane et al., 2008), and challenging behaviors during school disrupt the ability of these students to develop meaningful peer and adult relationships (Cullinan & Sabornie, 2004; Gresham et al., 2004). With state standards that encourage social emotional learning for all students, it becomes more important than ever for teachers to address these areas.

Students with EBD average more negative behaviors across a variety of different tasks compared to their typical peers (Rinaldi et al., 2008), and this low social competence makes it difficult for them to be successful in a school setting. To alleviate some of these difficulties, teachers and practitioners across education turn to social skills interventions. Social skills interventions are effective in reducing inappropriate behaviors, disruptions, and fights in students with EBD (Wilhite & Bullock, 2012) and in

improving pro-social skills such as cooperation, participation, and patience in students with EBD (Chen & Bullock, 2004).

Despite their noted success, only a small number of studies address social skills interventions for students with EBD (Kamps et al., 1992; Reddy, 2012). While social skill development is often discussed in the literature (Kauffman & Landrum, 2009), there is little research on treating social skills deficits in students with EBD, and an even smaller number of studies that address social skills for students in the elementary school setting. Moreover, the effect of peer-mediation as a component in these interventions is not discussed in length in the literature. The current study attempted to fill this gap in the literature to add to the overall body of research.

The purpose of the present study was to measure the effect of a peer-mediated social skills training on third, fourth, and fifth grade students aged 9, 10, and 11 with EBD. The current study proposed to explicitly teach students the target social skills of sharing, complimenting, and sportsmanship. The intervention in this study was adapted from Skillstreaming for the Elementary School Child (McGinnis & Goldstein, 1997), and used role-playing, dialogue, and practice with the participants to increase frequency of compliment giving, sharing, and sportsmanship behaviors across all participants. The study addressed the following research questions:

1. What is the effect of a social skills intervention on increasing sharing in students with EBD?

2. What is the effect of a social skills intervention on increasing compliments in students with EBD?

3. What is the effect of a social skills intervention on the sportsmanship skills of students with EBD?

4. Were students with EBD able to generalize skills learned in the intervention to a new setting?

Summary of Findings

This study examined the effect of a peer-mediated intervention on the sharing, complimenting and sportsmanship behaviors of three participants with EBD. When looking at all target skills, results indicated there were increases for all three participants during intervention phases, though target skills declined slightly when participants entered maintenance phases. In addition, participants displayed some target skills in the generalization setting where they received no direct instruction.

Research question one, two, and three. The first three research questions investigated whether or not participants with EBD could improve their ability to display the three primary target skills of sharing, complimenting, and sportsmanship. Results of the study indicate that participants did improve peer-related social skills when provided with a specific and targeted intervention. All participants improved from baseline to intervention on all three dependent variables. Effect size estimates indicated that two of the three participants demonstrated medium and strong effects of the intervention on all three dependent variables and these results are representative of the literature indicating positive effects of social skill interventions for students with EBD (Chen & Bullock, 2004). These results are important for the participants with EBD as improved social competence may ultimately improve academic and behavioral success.

While two participants demonstrated medium and strong effects of the intervention, effect size estimates for the third participant demonstrated only a weak effect on sportsmanship skills and a medium effect on sharing and complimenting. A variety of factors may have contributed to the variability of these results, including student mood and receptiveness during the intervention. Studies in the literature also note variability in results across participants, (Samalot & Poretta, 2013), and this can be attributed to the differences among participants in general, from information retention, to attentiveness.

This study was unique in that in continued to examine student performance on dependent variables as participants moved into a maintenance phase. Results of the study indicate that performance on nearly all dependent variables declined in the maintenance phase except for Albert's sharing behaviors which improved slightly. Similarly, effect size estimates also decreased on all but one dependent variable, and this suggests that there were medium to weak effects of the intervention through the maintenance phase, though means remained above the baseline levels for most skills. Notably, Albert maintained a strong effect of the intervention on his sportsmanship skills through the maintenance phase.

Research question four. To address the fourth research question, participants were observed in a generalization setting (school recess) two weeks after ending the maintenance phase. Particularly promising is the fact that most participants continued to show some level of proficiency in all target skills despite being in a different setting and receiving no explicit social skill instruction during this phase. Mean occurrences for the skill of sharing were higher in the generalization phase than in baseline for John and

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David, though not as high as during intervention. These results indicate a positive effect of the intervention on this skill for these two participants. While Albert did not appear to generalize the skill of sharing he did display a higher mean for sportsmanship in the generalization setting than in baseline, indicating the peer-mediated social skills intervention was at least partially effective for him. Mean occurrences for complimenting and sportsmanship skills showed few differences between baseline and generalization phases for all participants.

Being able to generalize skills learned in one setting to another setting is important for students with EBD because it is difficult to teach every skill in every setting. For the participants in the present study being able to use the skills taught during the intervention in a new setting with untrained typical peers was critical to their social inclusion. For students with EBD, increased opportunities to use and improve social skills learned during interventions leads to increased social competence. Improved social competence of students with EBD during school years can lead to improved outcomes in adult life.

Limitations

Along with the promising findings noted in the current study there are a number of limitations that must also be addressed. This section will address limitations of small sample size and response bias that may have been present. These limitations may have played a role in the final results of the study.

Small number of participants. The first limitation of this study was the small number of participants. The limited number of participants makes it difficult to generalize the results of this study to the larger population of students with EBD. Because students

with EBD are unique and display distinct characteristics, there may be conclusions drawn from the current data that are not reflective of the larger population of students with EBD. Including more participants in general may help to get a more complete picture of the population for which this intervention is effective. Despite the small number of participants, protocols were followed for high quality single case designs (Horner et al., 2005), lending support to the findings even though the participants were few.

Response bias. The second limitation of this study was potential response bias. The primary researcher in this study was also the teacher of the classroom for the participants with EBD. It is possible that participants may have displayed some behaviors to try and please their teacher. In addition, because the data collectors were known to the researcher it is possible that some data collectors may have also reported biased responses to try and please the researcher.

Discussion of Findings

Increasing social competence is essential for students with EBD, as deficits in this area provide a variety of obstacles to their academic and behavioral success. Interventions like the one used in the present study where social skills are taught explicitly in context with typical peers may improve the long-term success of these students. This section aims to shed light on key findings from this study.

Intervention components. The social skill intervention in the current study was successful in increasing prosocial behaviors in students with EBD. All participants in the current study showed increases in the area of sharing and sportsmanship, while showing slightly smaller positive results in the target skill of compliment giving. These findings

are consistent with studies in the literature that also point to the efficacy of social skills intervention for students with EBD (Blood et al., 2011; Chen & Bullock, 2004; Lo, et al., 2002; Wilhite & Bullock, 2012).

The current study had a number of components that may have played a role in the overall success of the intervention. Participants were given direct instruction, as well as opportunities to role-play scenarios and engage with peer models in sports activities. While this study did not do a component analysis some discussion of individual components of the intervention is warranted.

Direct instruction. Participants in the current study received direct instruction about target skills. After baseline, researchers spent time teaching participants about the target skills, and the different aspects required to enact the respective skills. For the first few minutes of each intervention session, the researcher spent time explaining the skill, while the participants listened. The researcher provided a formal definition of the skill, and an informal discussion on the application of the target skill was held between the researcher and participants. This direct instruction approach supported the participants to demonstrate increased occurrences of the target skills.

Results of the present study are consistent with other social skills interventions for students with EBD that also incorporated a component of direct instruction. For example, Wilhite and Bullock (2012) used direct instruction in target social skills to increase prosocial behaviors, such as initiating and carrying out goals in students with EBD. Similarly, Lo et al. (2002) implemented direct instruction on social skills in small groups with students with EBD and found participants with EBD increased prosocial skills of

on-task behaviors, appropriate conflict resolution, and cooperation. Results of the present study lend support to the use of direct instruction in social skills to improve prosocial behaviors in students with EBD.

Use of role-play. Another component of the current study was the use of role-play during the intervention. Participants were asked to act out different scenarios based on the skill they were working on. For example, they took turns acting out what appropriate and inappropriate sharing would look like. Participants did similar role-play exercises for complimenting and sportsmanship. Examples and non-examples of each target skill were provided between the researcher and participants. In many cases, the participants and peer-models came up with humorous situations to display target skills, and this helped keep them engaged. Role-playing provides an excellent medium for students to practice and apply learned skills, and many studies in the literature have used this component (Moore et al., 1995). Role-playing was a critical component in the intervention, and may have played a role in the eventual success of the intervention.

Results of the present study confirm findings from similar studies in the literature. Chen and Bullock (2004) used role-play to increase skills of cooperation, participation, and patience in students with EBD. Moore et al. (1995) used the strategy of role-playing in their study that involved competitive game-play from students with EBD. The results of their study indicated that all participants improved their reaction to peers, reaction to losing, and reaction to winning. The use of role-play in the studies provided a way for students to visualize and practice skills that they had been taught in a lecture format. It helped them be more engaged and participate in a valuable way. By increasing their

prosocial skills through study components such as role-play, participants with EBD improved their overall social competence, which ultimately may have meant that they were able to develop more meaningful relationships (Cullinan & Sabornie, 2004; Gresham et al., 2004). Interventions that include role-playing have shown signs of reducing social skill deficits (Gresham et al., 2004), and this improvement in social competency may improve academic and behavioral aspects of the lives of students with EBD.

   Focus on sports. The current study also took a unique approach when exploring possible activities where the participants could display social skills. Using the current body of literature as a guide, the researchers of the current study ultimately decided on a sports activity. Based on prior knowledge, researchers knew of the student interest in sports. Constructed on the concepts of context personalization (Walkington, 2017), which state the benefits of matching components of instruction to student interest, researchers felt that a sports activity would generate the most interest for participants, thus making the intervention more effective. The positive results of the current study may be partly attributed to the activity that researchers chose to implement.

   Similar to the current study Moore et al., (1995) improved pro-social behaviors related to good sportsmanship and decreased inappropriate behaviors of name calling and making opponents feel bad, in students with EBD using an intervention with a sport-related activity. Relatedly, Samalot and Poretta (2013) increased appropriate sport and game behaviors while simultaneously decreasing inappropriate behaviors in students with EBD using an intervention that focused on appropriate game related behaviors such as

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respecting equipment, congratulating the winner, avoiding blaming teammates, working cooperatively, and following rules. Focusing on sports in this activity was crucial to the participants with EBD, as their natural interest was towards sports. Research indicates that when there is individual interest in a topic, the participant will likely value or find that topic important to his or her life (Walkington & Hayata, 2017). In this study specifically, all three target skills could be transferred to settings even outside of sports, increasing overall social competence, and thus giving the participants' higher likelihood of long-term success.

Use of peer models. Peer models were an integral part of the current study, and including them as part of the intervention was crucial for a variety of reasons. Vygotsky (1978), stated in his concept of the Zone of Proximal Development, that through observations and mediation, individuals are able to progress greatly. According to this theory, a child can improve in their abilities simply by observing another individual who is slightly more advanced than them at any given skill. Drawing on the work of Vygotsky and the concepts of social-cultural theory and ZPD (1978), the current study incorporated peer-mediators in the implementation of curriculum in attempt to introduce participants with EBD to positive peer models who can display the skills that students with EBD must acquire.

The literature indicates the success of using peer models as positive examples for peers with EBD. Peer-mediation in social skills interventions has led to a variety of positive results including noted improvements in the ability of students with EBD to follow directions (Robinson-Ervin et al., 2016). Peer-mediation has also led to

improvements in recess behavior for students with EBD (Nelson et al.,1995). Observation of positive peer models who display appropriate social skills has helped to improve the social competence of students with EBD. The current study endeavored to implement a social skills intervention with students with EBD through the use of peer mediators to increase the effectiveness of the implementation.

Role of verbal skills. All of the participants showed strong improvements in the skill of sharing during intervention and maintenance phases, however, the other two targets skills of complimenting and sportsmanship did not show improvements to the same extent. One reason for this may be that sharing in this study was represented by passing the ball, which is a non-verbal skill. Compliment-giving and sportsmanship were largely represented by the participants saying something verbally to other participants or the typical peers. Researchers have examined the incidence of children with EBD who experience co-occurring language delays (Benner, Nelson, & Epstein, 2002) and the deficits in language processing abilities of students with EBD (Rodgers-Adkinson, 2003) may have contributed to the low number of occurrences of compliment-giving and sportsmanship skills in this study.

The interpretation and use of language are complex processes that require the integration of attention, problem-solving, memory, and information management (Snyder, Dabasinskas, & O'Connor, 2002). Processing ability requires both automatic interpretations and controlled processing, an area of difficulty for students with EBD (Schneider & Shiffrin, 1997). Participants with EBD in this study may not have been able to integrate the complex language processes necessary to display compliments and

sportsmanship skills within the constraints of the activity. In other words, they may have still been processing the verbal components when the activity was over. These factors may have contributed to the participants showing fewer instances of complimenting and sportsmanship even though they improved quite a bit on the skill of sharing.

Length of intervention phases. In this intervention, only five days were allocated to direct instruction of each target skill. While participants showed improvement in all skills from the baseline phase to the intervention phase, target skills declined in the maintenance phase. This relatively short period of instruction on each target skill may have contributed to the declines in performance observed in the maintenance phases for all participants. By increasing the time spent on instruction for each target skill, researchers may have been able to provide participants with the tools necessary to maintain target skills. Nelson et al. (1995) devoted a full 28 days to implementing a peer-mediated intervention, which was much longer than the current study. Three participants with EBD in the Nelson et al. study showed improvements in social skills acquisition and reductions in negative social behaviors and participants were able to maintain and generalize their skills to the lunch setting. The Nelson et al. (1995) study provides support to the premise that longer intervention may strengthen outcomes and lead to generalization of skills. However, in a school setting practitioners may be more likely to implement shorter interventions, as they are easier to incorporate into everyday school activities. Finding the right balance is crucial. Effective interventions are needed to improve the social skill deficits in students with EBD, but ensuring feasibility to practitioners is also vital.

Generalization. The current study utilized a generalization phase to measure the extended effect of the intervention on participants' ability to use the skills learned during intervention with untrained peers in a new setting (upper grades morning recess). The generalization phase was held two weeks after the maintenance phase ended, and participants did not receive any instruction of target skills during this phase. Participants were able to generalize the skill of sharing to this new setting with untrained peers, but there was only minimal display of compliments and sportsmanship in the generalization setting. These results are similar to studies such as Samalot and Poretta (2013), where the intervention was successful, but students were unable to generalize the skills to the extent they did during the intervention. It is important for students with EBD to be able to generalize skills learned to new settings and with untrained peers, as having to teach every skill in every setting with every potential peer is impractical. The ability of students with EBD to generalize skills is critical to long term academic and behavioral outcomes.

Implications for Research

While the current study presented notable results, there are a variety of directions that future researchers may wish to explore. Based on the data collected, it seems that all of the participants showed increases in all target skills during the intervention, but the data seemed to drop off in occurrences of those target skills over time. Future researchers may wish to extend the number of days that they spend in the intervention phase for each skill. This would give participants more time to practice, understand, and apply the skills learned. Increasing time spent in the intervention may lead to improvements in the generalization phase (Nelson et al., 1995), and this ability to transfer skills across setting

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with different participants is important for the long-term outcomes of students with EBD. Researchers may choose to adjust the structure of the study in order to refer back to skills after a period of time. This may help students in maintaining the skills by providing a refresher. In the current study, it was not feasible to revisit skills learned during the intervention, but researchers may choose to take this approach to help the social competence of their students with EBD.

Another area to explore in future research is the comparison of skills between students with EBD and typical peers. Typical peers were included in this intervention to provide a positive example of the target skills being presented and were trained prior to the implementation of the intervention. Despite their involvement, no data was collected on their display of the target skills. As such, there is no way to understand how the performance of the students with EBD compared to the performance of students with typical development. Future researchers may wish to collect data on all participants including peer models to get a more comprehensive representation of the data.

Finally, researchers may wish to explore the effect of self-monitoring and reinforcements in a social skills intervention for students with EBD. Studies have shown the effectiveness of such strategies in social skill interventions (Blood et al., 2011), and future researchers may wish to implement these components in future studies. The present study did not include these components, but studies have shown that students with EBD were able to increase prosocial behaviors, and reduce negative behaviors through their implementation (Nelson, Smith, & Colvin, 1995). Based on the success that

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these strategies have shown in the literature, it may be a valuable piece to add to an already effective intervention.

Implications for Practice

Students with EBD are known to have negative life outcomes such as unemployment and substance abuse (Bullis & Yovanoff, 2006; Walker, Ramsey, & Gresham, 2004), likely brought forth by the difficulties they have in academic settings where they display damaging verbal and physical behaviors (Cullinan & Sabornie 2004; Gresham, Cook, Crews, Kern, & 2004; Landrum, Tankersley, & Kauffman, 2003; Walker et al., 2004). To improve these outcomes, practitioners and researchers have implemented social skill interventions, which have shown success in decreasing negative behaviors (Kamps, Kravits, Stolze, & Swaggart, 1999), and increasing prosocial behaviors (McDaniel, Bruhn, & Troughton, 2017). Practitioners constantly find ways to improve outcomes for their students and results of the current study provide several implications for practice important to K-12 settings.

Including peer-models improves the academic experience of students with EBD by providing them with a positive example and helping them reach the full extent of their Zone of Proximal Development (Vygotsky, 1978). Practitioners in the field may wish to extend beyond their classrooms and reach out for support from peer-models to benefit their students with social skill deficits. Incorporating trained peer models in authentic activities improves outcomes for students with EBD and skills learned can transfer to untrained peers. For improved outcomes, finding ways to train peers and include them in

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activities with students with EBD in K-12 settings is something that practitioners may wish to consider.

Using a peer mediated intervention that incorporates direct instruction, role play and sports activities could be beneficial for practitioners. Students with EBD often struggle in less structured settings such as recess, but can display appropriate skills when provided with targeted and specific intervention. Additionally, when they are interested in an intervention, they are more likely to value it and apply it to their lives (Walkington, 2017). Interventions that are interesting for participants, and that have a wide variety of components, such as role-play and peer-mediation are more likely to be effective for the overall social progress of students with EBD.

Summary

Students with EBD lack social skills and have limited social competence, and the lack of these essential skills manifests in aggression, problem behaviors, drop-outs, and difficulties later in life. Social skill interventions for students with EBD were shown to reduce aggression and problem behaviors and increase social competence (Lo et al., 2002). The current study attempted to teach social skills to three participants with EBD, and the results indicated that the intervention was successful in doing so. Interventions such as this need to continue, so that the vulnerable population of students with EBD can succeed throughout academic and adult life.

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Appendices

Appendix A: Teacher Checklist

Student Name_____

Please rate the student on a scale of 1-5. 5 being the highest score, and 1 being the lowest.

1. This student displays positive social skills

1   2   3   4   5

2. This student has good attendance (Misses less than 2 days a semester)

1   2   3   4   5

3. This student is a role model for other students.

1   2   3   4   5

4. This student demonstrates resiliency in student relationships.

1   2   3   4   5

Appendix B: Frequency Data Sheet

For every incident of sharing, complimenting, and sportsmanship, make one tally in the section below, for the day you are observing on. 1 Tally = 1 Occurrence.

Name of Student: _____ Name of Data recorder: _____

	DV-1 Sharing	DV-2 Compliments	DV-3 Sportsmanship	Notes
Date- _/_/__				
Date- _/_/__				
Date- _/_/__				
Date- _/_/__				
Date- _/_/__				
Date- _/_/__				
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Date- _/_/__				
Date- _/_/__				
Date- _/_/__				

Appendix C: Fidelity Checklists

Fidelity Checklist: Sharing

As the researcher addresses the steps in the intervention, please mark yes or no. As the researcher delivers the intervention, please mark yes or no to whether you observed the step.

1. The researcher discussed how a person will feel if you do or don't share with them.

YES   NO

2. The researcher initiated thinking regarding who a person may want to share with.

YES   NO

3. The researcher gave a description of an appropriate time to share, and gave examples about when another person needs or would enjoy using something that the student possesses.

YES   NO

4. The researcher discussed how to share in a friendly and sincere way, and also discussed the body language, voice tone, and facial expression associated with sincerity will be discussed.

YES   NO

5. The researcher initiated role play activities and practice on how to share with your peers.

YES   NO

Fidelity Checklist: Compliments

As the researcher addresses the steps in the intervention, please mark yes or no. As the

researcher delivers the intervention, please mark yes or no to whether you observed the

step.

1. The researcher discussed the different types of things that participants may want to

compliment someone on, such as appearance, behavior, or an achievement and gave

examples of compliments.

YES   NO

2. The researcher initiated thinking regarding who the participant may want to

compliment.

YES   NO

3. The researcher gave a description about an appropriate time and place to compliment

will be given.

YES   NO

4. The researcher described how compliment in a sincere way and discussed on body

language and facial expressions associated with sincerity.

YES   NO

5. The researcher initiated role play and practice on how to compliment peers.

YES   NO

Fidelity Checklist: Sportsmanship

As the researcher addresses the steps in the intervention, please mark yes or no. As the researcher delivers the intervention, please mark yes or no to whether you observed the step.

1. The researcher discussed the different types of things that participants may want to consider when displaying sportsmanship such how they are feeling, how the other person may be feeling, and what things to say whether you win or lose.

YES   NO

2. The researcher gave examples of how to display sportsmanship, such as keeping negative comments to a minimum, losing gracefully, and also how to win gracefully.

YES   NO

3. The researcher gave a brief description about an appropriate time and place to display sportsmanship such as during breaks in the activity, or at the very end.

YES   NO

4. The researcher discussed how to display sportsmanship in a sincere way such as the body language and facial expressions associated with sincerity.

YES   NO

5. The researcher initiated role play and practice on how to display sportsmanship with your peers.

YES   NO

Appendix D: Student Self-Report Sheet

Name _____

Please rate yourself on a scale of 1-5. 5 being the highest score, and 1 being the lowest.

1. I know how to share with others.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$

2. I am comfortable sharing with others.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$

3. I know how to compliment others.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$

4. I am comfortable complimenting others.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$

5. I know how to display sportsmanship.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$

6. I am comfortable displaying sportsmanship.

$$1 \quad 2 \quad 3 \quad 4 \quad 5$$