

Spring 2017

# The Impact of Second Step on Foster Youth with Disabilities

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The Impact of *Second Step* on Foster Youth with Disabilities

Matthew Morrison

Thesis Submitted in Partial Fulfillment of the Requirements for the  
Degree of Master of Arts in Education

California State University, Monterey Bay

May 2017

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EFFECTS OF SECOND STEP ON FOSTER YOUTH

The Impact of *Second Step* on Foster Youth with Disabilities

Matthew Morrison

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## EFFECTS OF SECOND STEP ON FOSTER YOUTH

### **Abstract**

The impact of classroom behaviors, particularly aggression, on education is an ongoing concern among educators. Aggression includes behaviors formed with the intent to harm an individual physically or verbally. Students with disabilities typically engage in aggressive behaviors more frequently due to elevated levels of stress and anxiety. Further, students with disabilities living in the foster care system are even more at risk for aggressive behaviors due to increased stress and anxiety. Research suggests that cognitive-based interventions, such as *Second Step*, are effective in changing behavior and reducing aggression. Using an A-B single case design, this study examined the impact of the *Second Step* program at reducing aggression in students with disabilities living in the foster care system. Participants included one male and two female students attending a non-public school in Central California. A frequency count was used for this study to measure the number of aggressive behaviors. Five pre-selected lessons from the *Second Step* program were taught as the intervention. Results did not provide substantial evidence of program effectiveness, though some participants showed a decrease in aggression.

*Keywords:* aggression, Second Step, cognitive-based intervention, foster care system

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## The Impact of *Second Step* on Foster Youth with Disabilities

### Literature Review

Of the many concerns regarding the education of our youth, one that is considered widespread and in need of significant attention is student behavior (Gladden, 2002). Educators believe that student behavior in the classroom requires significant attention and management for students to be successful (Smith, Lochman, & Daunic, 2005). Research suggests that students are less likely to display inappropriate behaviors when they are engaged in their learning (Benner, Kutash, Nelson, & Fisher, 2013). Conversely, students are more likely to engage in maladaptive behaviors when there is less engagement (Benner et al., 2013). Maladaptive behaviors (e.g., disrespect for authority, noncompliance, truancy, hyperactivity and inattention, lack of self-control, and verbal and physical aggression) are not limited to any specific age or educational level (Smith et al., 2005).

These behaviors, particularly aggression, significantly impact the learning of all students in the classroom (Smith et al., 2005). The prevention of such behavior is critical for establishing a positive learning environment (Metzler, Biglan, Rusby, & Sprague, 2001). A positive learning environment is created when the classroom teacher uses positive learning skills (e.g., handling mistakes positively, using praise) to build positive relationships with students (i.e., having respect for all students to motivate learning; Sieberer-Nagler, 2015). Benjamin (1985) defines aggression as those behaviors intended on injuring another person (physically or verbally) or demonstrated intent on destroying property. The prevalence of aggression signifies the need for early intervention services or programs to address these concerns. Research suggests that early intervention services are effective at addressing and preventing inappropriate student behaviors.

The effectiveness of services are reduced when prevention and early intervention (PEI) is not implemented promptly (Conroy & Brown, 2004).

Though PEI is a research-supported methodology (Teglasi & Rothman, 2001), educators are still liable for addressing maladaptive student behavior in the classroom. Teachers are responsible for developing and implementing strategies that ensure the learning and safety of all students, particularly as more students with emotional disabilities mainstream into the general education classroom (Salmon, 2006). Mainstreaming, or inclusion, is the process of engaging participation for students with disabilities in the mainstream classroom, where specialized instruction and services are delivered for part, or all, of the school day (Guerin & Male, 2006). The planning and implementation of behavior strategies in the general education classroom can be effective for most students, but for students with severe emotional and behavioral disabilities, the scope and intensity of which behavioral interventions are needed are often beyond what can be accommodated in the general educational classroom setting (Landrum, Tankersley, & Kauffman, 2003). When a student's behavior supersedes academic needs, effective interventions must be in place for students to have access to academic opportunities (Cortez & Malian, 2013). It is critical that teachers have a classroom management plan in place to provide all students equitable learning opportunities.

### **Classroom Management**

As stated previously, teachers are responsible for developing and implementing strategies to address maladaptive classroom behaviors. Classroom strategies, interventions, and their effects on changing behavior, vary depending upon the experience and comfort level of the teacher in addressing difficult student behavior (Gebbie, Ceglowski, Taylor, & Miels, 2011). Instructional time is negatively impacted for all students when the teacher must address problem

behaviors. Students with special needs often exhibit behavior problems, which will often limit their participating in the general education classroom setting. Teachers must address the challenge of reintegrating students with special needs into the general education classroom, in addition to addressing behavioral issues students may bring. It is essential for teachers to implement effective strategies for successful student mainstreaming (Akalın & Sucuoğlu, 2015). Additionally, the teacher is responsible for engaging positive student interactions and teaching appropriate social skills for the benefit of learning (Jimerson & Haddock, 2015; Kaendler, Wiedmann, Rummel, & Spada, 2014). Limits in social skills and increase aggressive behavior negatively impacts student participation in the classroom setting, and must therefore be addressed.

### **Aggression**

All students are susceptible to engage in aggressive behavior, but students with disabilities, specifically those with emotional disabilities, are often more susceptible to act out aggressively (Rosenberg, 2012). Rose, Simpson, and Preast (2016) suggest that students with disabilities are more likely to engage in aggressive-like behaviors (e.g., bullying, fighting) because they experience higher levels of anger, frustration, and hostility than their non-disabled peers, making it more difficult to regulate emotions. Students with higher levels of dysregulation consistently experience higher levels of stress and anxiety, further increasing susceptibility towards aggression (Fernandez-Baena, Trianes, Escobar, Blanca, & Munoz, 2014). Instability outside the classroom and in the home environment often contributes to elevated levels of dysregulation.



### **Students Living in Foster Care**

Students living in the foster care system are typically subjected to higher levels of stress and anxiety, thus making them more vulnerable to failure in school (Zetlin, MacLeod, & Kimm, 2010). Students living in foster care habitually change schools multiple times throughout their educational career, which stimulates their stress and anxiety (Diaz, 2013). Additionally, disproportional representations of students living in the foster care system (i.e., students living in group homes or with a foster family) are referred to special education (Diaz, 2013). The higher referral rate of foster youth to special education is likely connected to these students' increased stress and anxiety, thus generating a need for behavioral intervention and services to address increased aggression. Limited research has been conducted on the effects of an intervention program at reducing aggression in foster youth.

Large-scale interventions are sometimes ineffective at altering behaviors of students with disabilities because the intervention programs do not often accommodate specific behavioral needs (Rosenberg, 2012). These interventions are even less effective for students living in the foster care system, due in part to the length of time the student is enrolled at a particular school. Students living in the foster care system typically change schools upwards of two times in an academic year (Diaz, 2013; Zetlin et al., 2010), impeding on the duration and success of any intervention or program. Furthermore, the transient nature of this population makes implementing a research intervention protocol challenging; thus, generating the need for the intervention design to directly target the specific student behavior.

### **Cognitive-Based Interventions**

Research suggests that cognitive-based interventions (CBI) are effective at reducing and/or preventing maladaptive behaviors, including aggression (Cole, Treadwell, Dosani, &

Frederickson, 2013; Rait, Monsen, & Squires, 2010; Smith et al., 2005). Riccomini, Bost, Katsiyannis, and Zhang (2005) define CBI as a set of related interventions designed to modify an individual's thoughts and behaviors to change behavior. An effective CBI program aims at teaching preventative strategies, such as problem-solving and pro-social aptitude (Edwards, Hunt, Meyers, Grogg, & Jarrett, 2005).

A review of the literature suggests that CBI's are effective at teaching skills such as self-management and problem-solving (Agran, Blanchard, Wehmeyer, & Hughes, 2002). Research shows a reduction in aggressive behaviors when students learn these skills (Etscheidt, 1991). In a study researching the effects of the *Anger Control Model*, a CBI program, the researcher evaluated the effects the model had in reducing aggressive behaviors by using cognitive-based methods from the program. Research supported this methodology, and found that the program was effective in decreasing aggression by changing event processing cognition and generating alternative student responses (Etscheidt, 1991). Participants in this study attended schools designed specifically to address the behavior of students with behavioral disabilities (Etscheidt, 1991). Based on this research, it can be suggested that CBI's alter an individual's cognitive processing, thus generating a change in behavior. It can also be suggested that CBI's are effective at altering the behavior of students with behavioral disabilities.

**Second Step.** A more current CBI program being implemented is the *Second Step* intervention program, developed by the Committee for Children. The *Second Step* program teaches social skills related to empathy, emotion management, and problem-solving, using a multi-component approach in teaching these skills. Problem-solving skills, in addition to self-regulation, are essential parts of the *Second Step* program, and aim to scaffold a students' ability to handle interpersonal conflicts successfully (Committee for Children, 2011). Research

indicated that this program worked most effectively when a multicomponent approach was used, rather than a single component approach (Frey, Nolen, Edstrom, & Hirschstein, 2005). Studies of the program, using a multicomponent approach, have been conducted to demonstrate changes in behavior. A two-year study demonstrated that the program was effective at increasing social competence and decreasing antisocial behavior of students in grades Kindergarten up through sixth grade (Frey et al., 2005). The evaluation of program effects on student goals, attributes, and behaviors was the focus of this study (Frey et al., 2005). Another study concluded that the program was effective at reducing physically aggressive behaviors in sixth grade students attending middle school (Espelage, Low, Polanin, & Brown, 2013). Each study was designed to measure specific outcomes of student behavior, including perceptions of behavior (Frey et al., 2005), perpetration, and victimization (Espelage et al., 2013). Each study demonstrated the positive effects of the program in altering the overall behavior of participants in each study. The most significant changes included a change in student perceptions of behavior and reduced physical aggression.

*Second Step and diverse populations.* The above studies suggest that the *Second Step* program was effective in changing student behavior (Committee for Children, 2008; Espelage et al., 2013; Frey et al., 2005); however, each study was limited in researching the effects of the program on diverse student populations (Edwards et al., 2005). Due to limits in the research, the focus of this study was to evaluate the effects of the *Second Step* program in reducing aggression in special populations of students. The population of interest for this study was students with special needs living in the foster care system. Bettmann, Clarkson Freeman, and Parry (2015) indicate that students who are part of the foster care system typically have more school related behavior problems. *Second Step* is a cognitive-based, violence prevention program designed to

teach children how to solve social problems (Edwards et al., 2005). The program develops the students' ability to learn, have empathy for others, manage emotions, and develop skills in problem-solving (Committee for Children, 2011). Self-regulation, defined by the Committee for Children (2011) as attention, working memory, and inhibitory skills, is emphasized throughout the program. These skills are essential tools for student success in the classroom. Students that are able to self-regulate their emotions are more likely to engage in pro-social behaviors.

Though research shows a link between aggression, stress, and anxiety (Fernandez-Baena et al., 2014), skills incorporated in the *Second Step* program teach students regulation strategies that are essential to the academic, social, emotional, and behavioral success of students (Committee for Children, 2011).

### **Purpose**

The purpose of this study was to evaluate the effects of the *Second Step* CBI program in reducing aggression in students with disabilities living in the foster care system. Previous research supports the program's success in reducing aggression in the general population of students (Edwards et al., 2005; Frey et al., 2005), but research is limited in supporting program effectiveness on diverse populations of students. As stated previously, the *Second Step* program is a research-based intervention designed to teach children skills in learning, empathy, emotion management, and problem-solving (Committee for Children, 2011). Childhood aggression significantly impacts an individual's ability to succeed academically (Sullivan, Sutherland, Farrell, & Taylor, 2015) and must be addressed.

## Methods

### Research Question

Is the *Second Step* cognitive-based intervention program effective at reducing aggressive behaviors in elementary and middle school students with a disability, attending non-public school, and living in foster care?

### Hypothesis

Based on research, evidence-based intervention programs that teach skills such as problem-solving have been effective at reducing student aggression (Frey et al., 2005; Smith et al., 2005). Though no specific research has been conducted on the reduction of aggressive behaviors in students with disabilities (Edwards et al., 2005; Sullivan et al., 2015) and students living in foster care, the hypothesized outcome for this study was that the program would be effective at reducing aggression in all participants.

### Research Design

An A-B single-case design was used to evaluate the intervention's effect at reducing aggression. The intervention was implemented according to *Second Step* design (i.e., whole class; Committee for Children, 2011), but the focus of data collection was on the participants selected for the study. Participants were selected on the criteria of having a disability and living in foster care. Baseline data were collected simultaneously among participants until at least five stable baseline points were obtained. After baseline data had been collected, participants transitioned into the intervention phase of the study.

**Independent variable.** The independent variable was the *Second Step* program. *Second Step* uses a cognitive model that engages students in solving social problems, building social skill competency, and minimizing impulsive behavior (Edwards et al., 2005). The program is

divided into four units (Committee for Children, 2011) that teach students (a) skills for learning; (b) empathy; (c) emotion management and; (d) problem-solving. Five pre-selected lessons in empathy, emotion management, and problem-solving, were taught in this study.

**Dependent variable.** The dependent variable being measured was aggression.

Aggression was visually observed and assessed as either verbal or physical. Verbally aggressive behaviors included the use of profanity (e.g., cursing or other inappropriate words), obscene gestures (e.g., inappropriate hand signals or sexual gestures), derogatory remarks (e.g., disrespectful statements directed towards others), threats, or intimidation (Hayman, 2014). Physically aggressive behaviors included hitting, kicking, scratching, pinching, spitting, biting, grabbing, pushing others, or throwing things at others (Hayman, 2014).

### **Setting & Participants**

The study was implemented at a non-public school in Central California. The school shares a campus with a short-term residential treatment facility for children living in the foster care system, and primarily educates students with severe emotional and behavioral disabilities. Children across the state of California are residentially placed at the facility; three of the 24 residents at the facility attended the non-public school at the time of the study. The school serves a maximum of 12 students in first through eighth grade in a single, self-contained classroom. The total school enrollment at the time of the study was eight students; the classroom was staffed with one teacher and four paraprofessionals. The demographics of the student population included Hispanic/Latino (50%), Caucasian (25%), African American (12.5%), and Pacific Islander (12.5%). One hundred percent of students received special education services.

Eligible participants for this study included students who met the criteria of having a disability and living in foster care. All participants in the study received specialized academic

instruction as part of their Individual Education Plans (IEP). In addition, each student received 30-minutes of group and individual counseling weekly. Three participants from the class were selected for meeting these criteria.

**Mary.** Mary is an eight year old, Hawaiian female in the second grade. Her primary eligibility for special education is Emotional Disabilities. Primary behavioral concerns for Mary include physical aggression (e.g., hitting and kicking others) and elopement (i.e., running from the classroom).

**Jenny.** Jenny is an 11-year old Caucasian female in the sixth grade. Her primary eligibility for special education is Emotional Disabilities. Jenny's primary behavioral concern is verbal aggression (e.g., inappropriate language and threatening statements).

**Jeremy.** Jeremy is an 11-year old, Hispanic male in the sixth grade. His primary eligibility for special education is Other Health Impairment. Jeremy's primary behavioral concern is verbal aggression (e.g., inappropriate language and threatening statements).

### **Measures**

Frequency data was collected and measured on the number of aggressive incidents for each participant. Consideration was given for other methods of measurement, including the *Problem Behavior Frequency Scales* (Sullivan et al., 2015), which is used to measure the frequency of behaviors. This measure was not selected for this study because it is typically used in quantitative research studies with larger groups of participants (Sullivan et al., 2015). Other measures on attitudes and perceptions of aggression (Edwards et al., 2005) have been used in conjunction with the *Second Step* program. For the purposes of this study, frequency data was collected on the three participants using a tally chart to record the data (see Appendix A).

**Validity.** To ensure validity, the classroom teacher was solely responsible for implementing the intervention, and ensuring all independent observers had explicit training on the operational behaviors being measured (i.e., verbal and physical aggression). Observers were also given explicit training in collecting data on the prescribed behaviors.

**Reliability.** Inter-rater reliability (IRR) was executed by having an independent observer collect data for 20% the duration of the study. Data between the observers was collected and analyzed for reliability and accuracy. The independent observer verified a minimum of 80% agreement of the frequency count in behaviors.

### **Intervention**

The *Second Step* program was developed by the Committee for Children as a violence prevention curriculum for children in Kindergarten through 9<sup>th</sup> grade (Edwards et al., 2005). The intervention uses scripted lessons to guide instruction. Each lesson consists of: (a) warm-up; (b) story and discussion; (c) skills practice; (d) wrap-up; and (e) follow through (Committee for Children, 2011). The intervention offers flexibility by allowing the instructor to have open-ended discussion on concepts and topics. As stated previously, the program teaches skills in learning, empathy, emotion management, and problem-solving to support the reduction of impulsive and aggressive behaviors (Edwards et al., 2005). Curriculum is divided up according to grade level. Curriculum at the third-grade level was selected for use in this study because of the broad age range and skill level of participants. A review of each participant's IEP assisted in selecting the appropriate curricular level to use

Each grade level curriculum in the *Second Step* program consists of 22 lessons taught over a period of 22 weeks (Committee for Children, 2011). Lessons are taught once a week, with daily activities that follow in the remaining school week (Committee for Children, n.d.).



For this study, five lessons were selected from three of the program units (i.e., empathy, emotion management, and problem-solving) and were taught consecutively over a period of five days, without daily follow up activities.

**Accepting differences.** This lesson is categorized under the unit on empathy, and was developed to assist children in finding commonalities between themselves and others (Committee for Children, 2011). This lesson was selected because it teaches children how to accept differences, and avoid labeling, or stereotyping, other students (Committee for Children, 2011). Accepting differences is the eighth lesson in the grade unit.

**Showing compassion.** This lesson is also categorized under the empathy unit. It was developed to guide children in understanding the feelings of others (Committee for Children, 2011). This lesson was selected to help participants learn how to provide emotional support to peers in an effort to reduce bullying and other negative behaviors (Committee for Children, 2011). Showing compassion is the ninth lesson in the grade unit.

**Managing anger.** This lesson is part of the unit on emotional management, and teaches students calming techniques to encourage de-escalation when feeling angry (Committee for Children, 2011). This lesson was selected because calming strategies are supported by research in reducing anger and aggression (Edwards et al., 2005; Brown, Jimerson, Dowdy, Gonzalez, & Stewart, 2012). Managing anger is lesson 15 in the grade unit.

**Managing hurt feelings.** This lesson is also part of the emotional management unit, and teaches students how to manage strong emotions, and avoid jumping to conclusions (Committee for Children, 2011). This lesson was selected because it teaches children how to be assertive, rather than impulsive when experiencing strong emotions (Committee for Children, 2011). Managing hurt feelings is lesson 16 in the grade unit.

**Solving classroom problems.** This lesson is part of the problem-solving unit, and is designed to strengthen students' understanding of the "STEP's" to problem-solving (i.e., S: Say the Problem, T: Think of Solutions, E: Explore Consequences, P: Pick the Best Solution; Committee for Children, 2011). This lesson was selected because problem-solving skills are research support tools students can access to avoid engaging in aggressive behaviors (Edwards et al., 2005). Solving classroom problems is lesson 19 in the grade unit.

### **Procedures**

A stable baseline of five data points was collected simultaneously for each participant using a frequency chart. Stability was considered to be no more than four points between the lowest and highest frequency in baseline. The frequency of aggressive behavior incidents was recorded as data for each student. Aggressive behaviors were observed as either physical or verbal. Data was collected twice daily in 30-minute increments at 10:15am and 12:15pm. Participants transitioned to intervention when baseline was established. Intervention data collection procedures were identical to baseline data collection procedures.

Lessons for the intervention were taught over five consecutive days and within the same time frame as the classroom social skills block (10:15am – 10:45am). Each lesson was delivered in one 30-35 minute session. Lesson content was preceded by five minutes of prerequisite skills (Committee for Children, 2011) and were taught using the provided lesson scripts and materials. Program adaptations (e.g., extensive review of previous lessons, less partner sharing and more whole group sharing) were made to accommodate student skill levels, prior knowledge, and understanding of concepts.

**Fidelity.** To ensure intervention fidelity, the researcher was the sole facilitator of the study. Participants, including other students in the class, were not informed of their involvement

or participation in the study to maintain accuracy in the data being collected. Additionally, parents and classroom staff, and group home staff were instructed not to discuss the intervention with participants.

Research fidelity was also maintained by respecting the time allotted for the intervention. The intervention did not exceed five total lessons. An additional observer outside the classroom provided fidelity by observing 20% the duration of the intervention to ensure 100% fidelity. A fidelity checklist was created and signed by the observer (see Appendix B).

### **Ethical Considerations**

Ethical conduct was maintained in this study by assigning pseudonyms to participants, assuring their confidentiality. Consideration was taken for any potential harmful effects resulting from the intervention. There were no negative effects resulting from the intervention. Consideration was also taken for participants' limited social experiences as a result of living in the foster care system. Intervention content was adapted and made more accessible to students when subject matter was socially challenging (e.g., unfamiliar social setting/situation). Further consideration was taken for any missed instructional time, though no instructional time outside of the classroom's social skills block was used in the duration of the study.

**Validity threats.** Potential threats to validity were taken into account for this study. Sampling bias was examined for potential threats to validity. Participants were selected for convenience, in addition to meeting specific criteria. To ensure this did not impact the outcome of the study, the intervention was not introduced to participants prior to the intervention period. Additionally, students were not informed of their participation in this study. This eliminated potential changes in student behavior resulting from knowledge of their participation. Issues with reliability were examined for threats to validity. The researcher ensured that intervention

procedures were followed, that open-ended discussions remained on topic, and that the intervention followed the scripted format in sequence. This eliminated issues in reliability that might pose a threat to validity.

### **Social Validity**

At the completion of the study, four classroom paraprofessionals completed a four-point Likert scale (i.e., 1 = strongly disagree to 4 = strongly agree) social validity questionnaire (see Appendix C). The questionnaire, adapted from Berger, Manston and Ingersoll (2016), consists of nine questions designed to understand the perceived usefulness, significance and satisfaction with the implemented intervention (Kennedy, 2005). Participant responses were kept confidential and descriptive statistics were conducted to gain insights regarding the intervention.

Results indicated that classroom paraprofessionals thought the intervention had an impact on reducing aggression in participants. All responders agreed or strongly agreed that the intervention improved skills across multiple contexts, and improved skills quickly. Results also indicated a strong willingness to carry out the intervention beyond this study to improve student skills. Overall, results of the questionnaire suggested that the intervention had a positive impact on participants.

### **Data Analyses**

Intervention data were analyzed in conjunction with baseline data, to provide a precise measure of the rate of change in aggressive behavior (Klein, 1975). Changes in the frequency of aggression were examined and recorded by the researcher. Results reflect data collected in the morning and afternoon time intervals (i.e., 10:15am and 12:15pm).

Descriptive statistics and other analytical strategies were considered as methods for analyzing collected data. These methods of data collection are typically used in a variety of

studies to provide a more comprehensive review of results (Frey et al., 2005). Descriptive statistics were utilized in this study to analyze the data collected.

### **Results**

The results of the intervention are displayed in Figures 1 and 2. Figure 1 reflects data collected in the morning interval at 10:15am and Figure 2 reflects data collected in the afternoon interval at 12:15pm. Data in each graph is organized by participant and separated between baseline and intervention with a dotted line. Session observations are marked on the x-axis, and the frequency of aggressive behaviors are measured on the y-axis. Baseline and intervention data were each collected over a period of five days, for a total of ten days. The study was able to transition into the intervention phase because stability was attained in the morning interval. Stability in baseline was defined as no more than four points between the lowest and highest data point for each participant.

Mary displayed an average of 1.80 aggressive behaviors in baseline during the morning interval with a range of 0-4 (Figure 1). During the baseline afternoon interval, Mary displayed an average of 1.60 aggressive behaviors (Figure 2). The range of her scores for this interval was 1-2. During intervention, Mary showed a decrease in aggression during both intervals. Specifically, she averaged 0.60 aggressive incidents in the morning interval, with a range of 0-2 and 1.20 aggressive incidents in the afternoon interval with a range of 0-3.

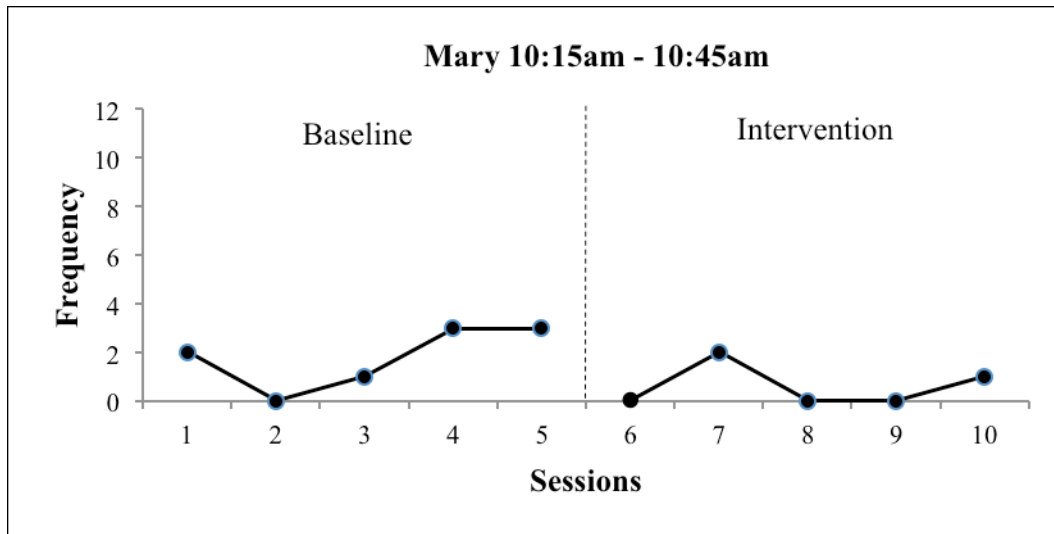


Figure 1. Mary's morning frequency of aggressive behaviors.

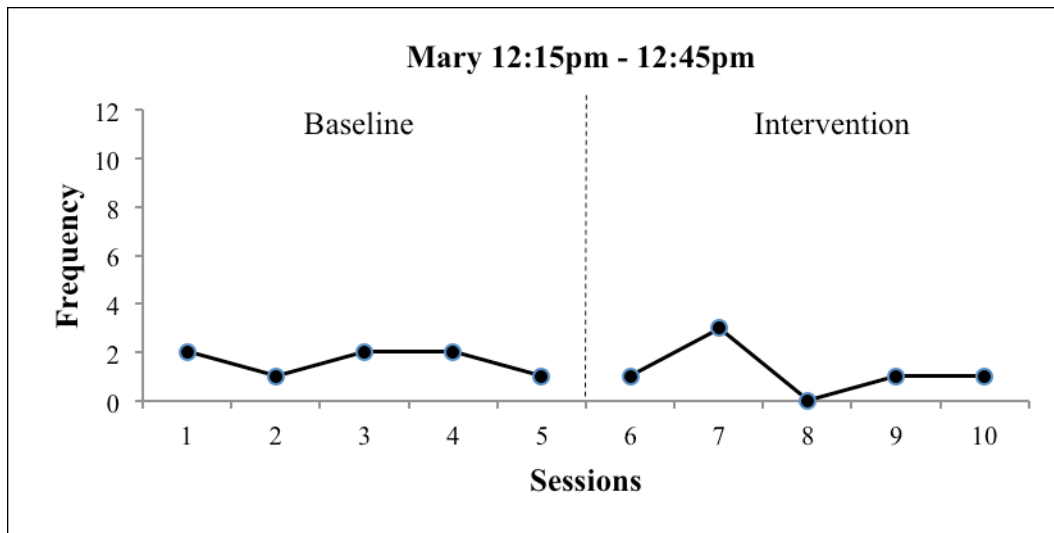


Figure 2. Mary's afternoon frequency of aggressive behaviors.

Jenny averaged 1.80 aggressive behaviors in baseline during the morning interval with a data range of 1-3, and 4.80 aggressive behaviors in baseline in the afternoon interval with a data range of 0-11 (Figures 3 and 4). The average number of incidents for the afternoon interval is skewed as a result of one data point in baseline, at which time Jenny engaged in 11 aggressive incidents. After the intervention, Jenny displayed an increase in aggressive behavior during the

morning interval, averaging 2.40 aggressive incidents. The range of this data was 1-5; however, she displayed a decrease in aggression during the afternoon interval, averaging 2.00 aggressive incidents in the afternoon with a range of 0-4.

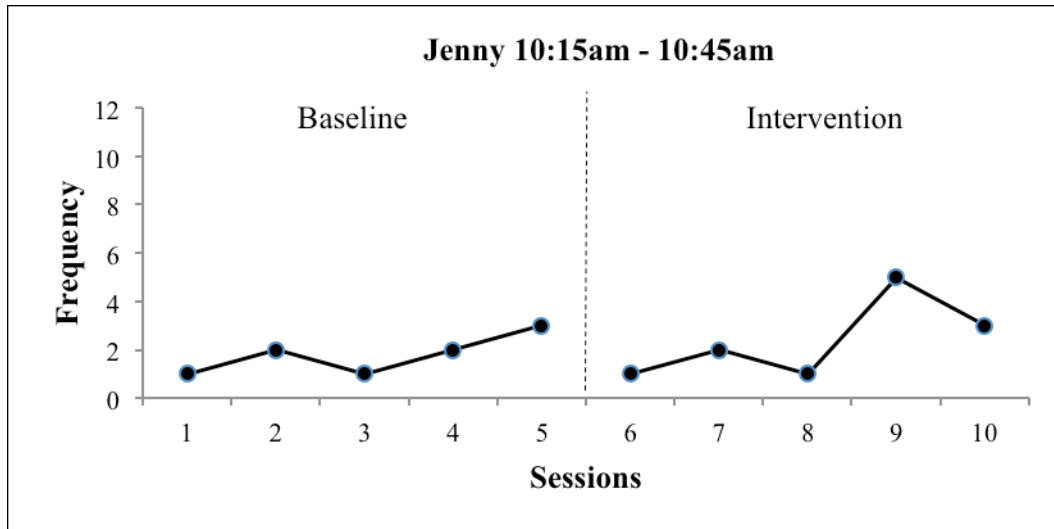


Figure 3. Jenny's morning frequency of aggressive behaviors.

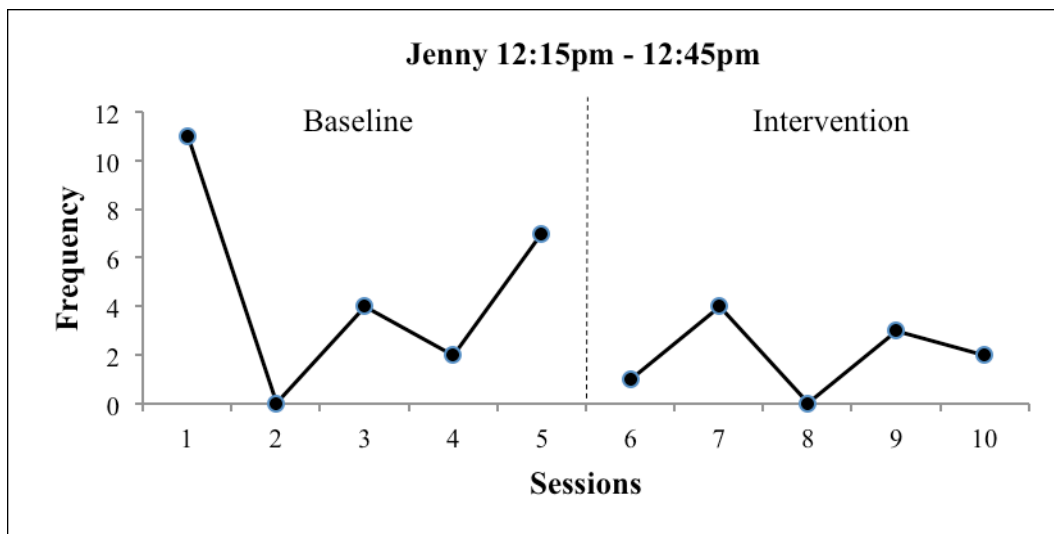


Figure 4. Jenny's afternoon frequency of aggressive behaviors.

Jeremy displayed an average of 3.00 aggressive incidents in baseline during the morning interval, and 3.20 aggressive incidents during the afternoon interval (Figures 5 and 6). The range for both intervals was 2-6. These averages are based off of four data points, as Jeremy was absent from school on the third session of data collection. After intervention, Jeremy displayed an increased average of 3.60 aggressive incidents during the morning interval with a data range of 2-6. During the afternoon interval, Jeremy displayed a decrease in aggression, averaging 1.40 aggressive incidents with a range of 0-2.

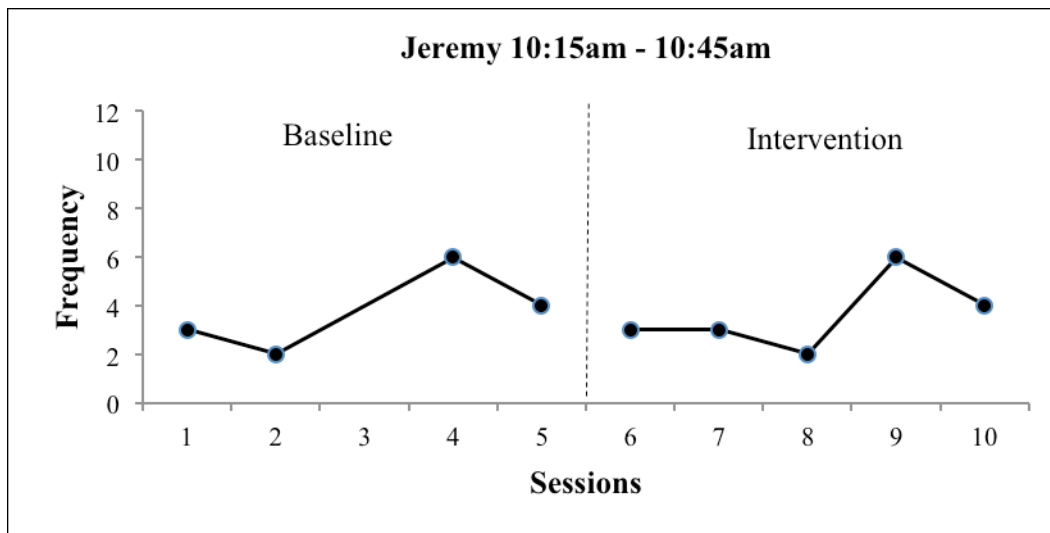


Figure 5. Jeremy's morning frequency of aggressive behaviors.



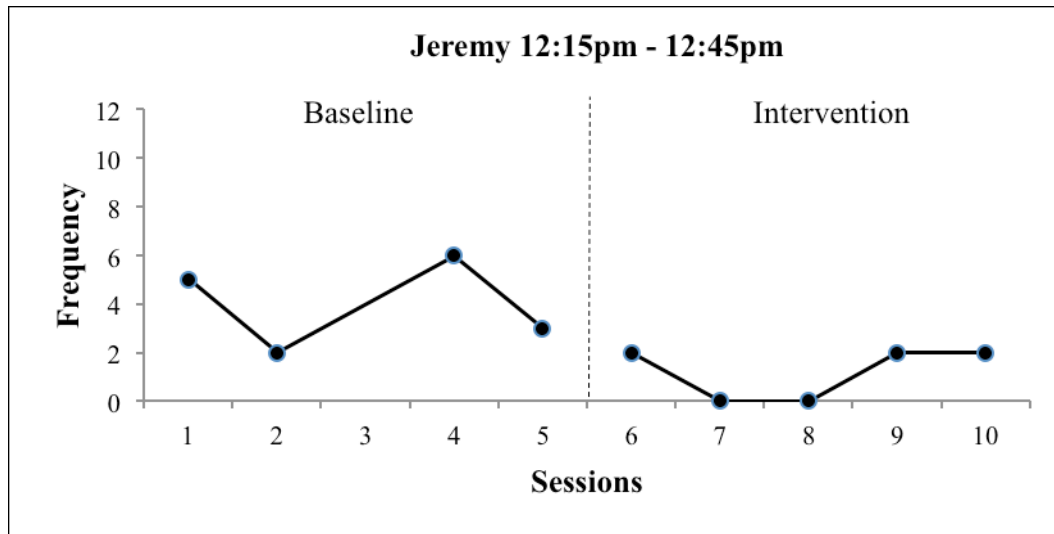


Figure 6. Jeremy's morning frequency of aggressive behaviors.

### Discussion

The purpose of this study was to evaluate the effectiveness of the *Second Step* program in reducing aggressive behaviors in students with disabilities living in the foster care system. The hypothesized outcome for this study was that the program would successfully reduce the frequency of aggressive behaviors in participants. The results obtained from this study indicate that the *Second Step* program was partially successful in reducing the frequency of aggressive behaviors. The results indicate an overall reduction in the average number of aggressive behaviors demonstrated by participants during the afternoon data collection interval; however, there was an increase in the average frequency of aggressive behaviors during the morning data collection interval for two of the three participants.

Overlapping data between baseline and intervention was calculated for each participant in the study. Data collected for Mary showed 100% overlapping data in the morning interval, and 80% overlapping data in the afternoon interval. Data collected for Jenny showed 100% overlap in the morning and afternoon intervals. Data collected for Jeremy showed 100% overlap in the morning interval and 60% overlap in the afternoon interval. This high rate of overlapping data

may have been due to the fact that aggressive incidences were already so low that there was a limited amount the data could decrease.

An analysis of the data demonstrated inconsistencies in the observed behaviors. A clearly defined pattern of aggressive behavior was not distinct, which created difficulty in acquiring stability in baseline behavior. Five baseline data points were collected to produce a more stable baseline. Four baseline data points were collected for one participant, Jeremy, who was absent for one baseline session. Stability in baseline was initially established in the morning interval for participants; however, it was not present during the afternoon interval for all participants. An analysis of the results showed greater stability in the data collected in the afternoon interval during the intervention phase. This is likely a result of the time of day afternoon data was being collected. The afternoon data collection interval was at a time of day when students were engaged in more structured activity.

The variation in student behavior was likely influenced by extraneous factors developed through the course of the study. First, data collection for the morning interval occurred during the classroom's social skills block, which immediately followed recess. Student behavior was likely influenced by this transition from recess. It is possible that the intervention did not have an immediate effect on student behavior following this transition from less structured activity. The frequency of aggression in the afternoon interval was much higher in baseline for two of three participants, but all three displayed an overall decrease during intervention. Students were engaged in more structured activity in the afternoon interval after the intervention had been delivered. This analysis suggests that the *Second Step* program was partially effective in reducing student aggression. Previous studies had analyzed student behavior during structured learning periods (Espelage et al., 2013; Frey et al., 2005) and found similar results.

Although consistent patterns in the data were not evident throughout this study, there was some consistency among participants during one period of data collection when the frequency in aggressive behaviors was at its lowest. During session 8, all participants displayed significantly less aggression as compared to other sessions. This was likely a result of school being a minimum day during that session. Though participants engaged in the same activities and routines in each data collection interval, the structure of a minimum day at school was different than other days, which likely influenced student behavior. In addition, the intervention lesson for that session comprised of problem-solving, which was a skill set observed as effective among participants during intervention. That is, the researcher anecdotally observed students using problem-solving much more effectively, and quickly, than other skills.

An analysis using the range in frequency of aggressive behavior provides some evidence that the *Second Step* program was effective for participants. In six data collection opportunities (i.e., two data collection periods for each student), the range in the frequency of behaviors narrowed or remained consistent in four data collection periods. This indicates that behavior gradually became more stable during intervention. This increase in stability provides evidence that the program is able to generate greater stability in student behavior. Other studies have demonstrated that greater stability in the data, sustained over long periods of time, generally correlated with reduced aggression in students (Espelage et al., 2013; Frey et al., 2005).

The results of this study provided partial evidence of program success in reducing student aggression. Although there were no definitive patterns in the data, results displayed a partial reduction in student aggression. In the morning interval, however, results showed an increase in the frequency in aggression. There was not enough evidence gathered from this study to apply the results to the population of students used in this study (i.e., students with disabilities living in

the foster care system). Although minimal evidence was attained to support program effectiveness in reducing student aggression, data continued to support the main body of *Second Step* literature, which suggests that it increased students' social competence (Frey et al., 2005). Increased social competence in problem-solving and self-regulation was observed in students. These skills guided students in solving peer conflicts and making decisions to solve interpersonal conflicts (Committee for Children, 2011) that could have lead to physical or verbal altercation.

### **Limitations and Future Research**

Limitations in this study must be considered when interpreting the results. One such limitation was the length of the study. From baseline to intervention, this study was conducted in under two-weeks. The *Second Step* intervention contains 22 lessons that are designed to be taught over a 22-week period for each grade level. The results of this study only reflect the short-term effects of the program. In addition, lessons within the intervention were taught out of sequence. Future research should investigate the effects of the intervention, using the same population as this study, when all lessons are taught, and delivered, in sequence. This research would likely provide a more comprehensive outlook on the long-term effects of the *Second Step* program. A more defined outcome on the effects of the program could be obtained when the intervention is taught in its entirety.

Another limitation of this study was the sample size and variability within the sample. Three students were selected to participate in this study for meeting specific criteria (i.e., having a disability and living in foster care), yet participants varied in grade and age. Furthermore, third grade curriculum was chosen for this research because lesson concepts and materials were considered to be most appropriate for all participants. Though skill sets in each grade level are similar in concepts taught, they are adapted to be developmentally appropriate for each grade

level. Future research could explore the effects of the program, using larger, homogeneous samples of students in the same grade. This would likely produce more detailed results reflecting effectiveness in the *Second Step* program for students with disabilities and living in foster care.

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Appendix A

Date: _____		Aggression Frequency Chart 10:15 am - 10:45 am		Baseline / Intervention Data Collection	
Student	Physical Aggression	NOTES	Verbal Aggression		
<b>Mary</b>	Hitting		Profanity		
	Kicking		Obscene Gestures		
	Scratching		Derogatory Remarks		
	Pinching		Threats		
	Biting		Intimidation		
	Pushing Others				
	Throwing Things at Others				
	Spitting				
	Grabbing		<b>Total (phy/verb)</b>		
	<b>Total (Phys Agg):</b>			<b>:Total (Verb Agg)</b>	
<b>Jenny</b>	Hitting		Profanity		
	Kicking		Obscene Gestures		
	Scratching		Derogatory Remarks		
	Pinching		Threats		
	Biting		Intimidation		
	Pushing Others				
	Throwing Things at Others				
	Spitting				
	Grabbing		<b>Total (phy/verb)</b>		
	<b>Total (Phys Agg):</b>			<b>:Total (Verb Agg)</b>	
<b>Jeremy</b>	Hitting		Profanity		
	Kicking		Obscene Gestures		
	Scratching		Derogatory Remarks		
	Pinching		Threats		
	Biting		Intimidation		
	Pushing Others				
	Throwing Things at Others				
	Spitting				
	Grabbing		<b>Total (phy/verb)</b>		
	<b>Total (Phys Agg):</b>			<b>:Total (Verb Agg)</b>	

**Appendix B**

## Fidelity Checklist

Date	Session	Morning or Afternoon Interval	Signature
Wednesday, March 22, 2017	9	Morning	
Wednesday, March 22, 2017	9	Afternoon	

**Appendix C**

## Social Validity Questionnaire

Questions:		1 Strongly disagree	2 Disagree	3 Agree	4 Strongly Agree
1	This treatment was effective				
2	I found this treatment acceptable for increasing the student's skills				
3	Using the treatment improved skills across multiple contexts (home, classroom, community)				
4	I think the student's skills would remain at an improved level even after the treatment ends				
5	This treatment improved family functioning				
6	This treatment quickly improved the student's skills				
7	I would be willing to carry out this treatment myself if I wanted to increase the student's skills				
8	I would suggest the use of this treatment to other individuals				
9	This treatment decreased the level of stress experienced by the student's family				