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Strategies for Teachers to Use When Regulating Aggressive Student Behavior Related to Autism Spectrum Disorder

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Strategies for Teachers to Use When Regulating Aggressive Student Behavior Related to Autism Spectrum Disorder

by

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Table of Contents

List of Tables

Table Page

Chapter 1: Introduction

Overview

Autism Spectrum Disorder (ASD) refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication. According to the Center for Disease Control, autism affects an estimated one in 59 children in the United States today (Autism Speaks, 2013). According to Autism Speaks, ASD is becoming a prevalent diagnosis for individuals (Autism Speaks, 2013.). The increase is ASD among children affects not only their families, but also their educators and classmates (Corona et al., 2017)**.** Through research, it is found that a majority of autism diagnoses are diagnosed with a comorbid psychiatric disorder (Williams et al., 2012). Not only is ASD comorbid with psychiatric disorders, but individuals with ASD can also display aggressive behaviors toward others and themselves. Special Education teachers and staff are feeling underprepared for the challenges presented in their classrooms when a child with ASD displays these behaviors (Corona et al., 2017). Many curriculums and behavior supports have been designed to assist educators in their classrooms (Espelage et al., 2015). Students of all abilities deserve the best their teachers can provide for them. The use of the strategies and therapies that will be discussed in this paper has the potential to be that one additional support given to a teacher to increase their self-efficacy in this profession.

I am currently working in an Intermediate District Federal Setting IV Special Education classroom with students in grades 5-8. A majority of the students served within my district have an Individualized Education Plan (IEP) and are diagnosed with a primary disability. The students in my classroom are all diagnosed with Autism Spectrum Disorder (ASD), and almost all have a

comorbid disability, whether that be a Specific Learning Disability (SLD) or Other Health Disability (OHD). The students I have worked with display a vast range of physical behaviors, such as punching or hitting others, throwing objects across a room and even head banging directly to the floor or wall repeatedly until blood is drawn. I and other staff ask ourselves the question of "What is our limit? How many times does he have to hurt us before we do something?" It does not feel good as their teacher to be asking these questions, because to some extent it feels like we are giving up on our students. It takes a lot of strength to keep the dignity of the student at the forefront of our work when aggressive behaviors are consistent and dangerous. What is more challenging is trying to create safe and effective strategies to manage the aggressive behaviors when they occur at such a consistent level.

This is an important topic because "special educators are a high-risk group, prone to low job satisfaction, low self-efficacy, and increased stress and burnout" (Emery & Vandenberg, 2010). Special education teachers are at the forefront of these aggressive behaviors that can arise on any given day, at any given time. If special educators can enter their teaching career with behavior management strategies and social emotional learning training prior to entering the classroom, there is the potential for the burnout rate of special educators who are leaving the field due to aggressive behaviors to decrease. When students demonstrate aggressive behaviors, the whole classroom becomes affected, especially the student who is displaying the behaviors (Anderson, n.d.). This paper will examine the current teacher burn out rate in special education, along with how students with ASD perceive their social skills and physical behaviors. This paper will also identify safe and effective strategies for teachers to use in and out of the classroom to alleviate the student's behaviors before becoming aggressive toward others and/or themselves.

Social Emotional Learning (SEL) is a common practice entering today's classrooms ("How it Works", n.d.). SEL curriculums are designed to give an enriched education to help individuals regulate their emotions ("How it Works", n.d.). Research has found that if SEL practices are implemented with a high-quality curriculum, students will be more likely to demonstrate appropriate behavior, increasing their academic ability as well (Espelage et al., 2015). Social Emotional Learning can be taught in numerous ways, and there are even more curriculums and programs accessible to schools ("How it Works", n.d.). SEL and strategies alike can provide teachers and school professionals support and knowledge to better equip themselves to work with students who display aggressive behaviors related to ASD.

Research Question

The research question that is going to be addressed in the review of literature: What strategies can teachers use to help students diagnosed with Autism Spectrum Disorders regulate their aggressive behaviors?

Importance of Review

In a field that is continually changing and evolving to fit the needs of all students, maintaining professionals in the special education setting is imperative. It has been reported that teachers and other school professionals do not feel adequately trained to work with aggressive behaviors related to autism spectrum disorders and other disabilities (Emery & Vandenberg, 2010). The high-risk, aggressive behaviors are a cause for staff burnout (Rodríguez et al., 2012). Staff need to have strategies that they can implement into their classroom routines to assist in managing behaviors that are student focused, while also being safe and effective. This paper provides teachers and other school professionals student-first approaches to help the aggressive

student become safe and maintain body regulation both in and out of the classroom (Williams et al., 2012).

Focus of Review

This literature review is focused on individuals with autism spectrum disorders and strategies that can be implemented in a classroom setting to help decrease aggressive behaviors presented by those individuals, ranging in ages 1-21 years old. The studies in this review were published between 2010 and 2017. The SAGE online journal, Australian Academic Press, ELSEVIER online journal, DOVEPRESS, SJCAPP, Autism Research, and Autism Research and Treatment were used for the literature review. The keywords I used to find these studies were: *social emotional learning, aggressive behaviors related to autism,* and *strategies for teaching autism.* The following three journals were consulted for this literature review: The International Journal of Special Education, TCASE Interactive, and Principal.

Definitions

Aggressive Behavior. Aggressive behavior can cause physical or emotional harm to others. It may range from verbal abuse to physical abuse. It can also involve harming personal property. Aggressive behavior violates social boundaries. It can lead to breakdowns in your relationships. It can be obvious or secretive. Occasional aggressive outbursts are common and even normal in the right circumstances (Gabbey, 2019)

Autism Spectrum Disorder. Autism, or autism spectrum disorder (ASD), refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication. According to the Center for Disease Control, autism affects an estimated 1 in 59 children in the United States today (Autism Speaks, 2013).

Comorbid Disability. Comorbidity refers to the presence of more than one disorder in the same person. For example, if a person is diagnosed with both social anxiety disorder (SAD) and major depressive disorder (MDD), they are said to have comorbid (meaning co-existing) anxiety and depressive disorders (Cuncic, 2021).

Federal Setting. Refers to the percentage of time a student spends in special education: Federal Setting I) 0-21% in special education, Federal Setting II) 21-60% in special education, Federal Setting III) 6% or more in special education, Federal Setting IV) separate special education site, Federal Setting V) public hospital, day treatment, correctional facility etc. (*Acronyms Used in Special Education*, 2019).

Function of Behavior. The four functions of behavior are sensory stimulation, escape, access to attention and access to tangibles. Sensory Stimulation: "A person's own movements/actions feel good to that individual. For example, a child twirls his or her hair as they sit for an extended amount of time. If twirling hair gives that individual the sensory input they are seeking, then hair twirling will continue" (McClellan, 2021). Escape: "Something is (or signals) an undesirable situation and the person wants to get away from it. For example, a therapist says, 'Wash your hands,' and the learner runs out of the bathroom." Access to Attention: "Someone desires for access to social interaction(s). For example, the child screams, 'Look at me!' If screaming gets access to attention, then screaming will continue." Access to Tangibles: "Someone wants access to a specific item or activity. For example, Michelle takes the iPad away from Aaron, so Aaron pinches her. If pinching gets access to the iPad, then pinching will continue." Identifying the function of behavior helps us to

prevent problem behavior, teach our kids better ways to have their needs met and ensure consistency across all environments (McClellan, 2021).

IDEA. The Individuals with Disabilities Education Act (IDEA) is a law that makes available a free appropriate public education to eligible children with disabilities throughout the nation and ensures special education and related services to those children. The IDEA governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children, and youth with disabilities (What is the Individuals with Disabilities Education Act?, *2019*).

Least Restrictive Environment. LRE is part of IDEA. IDEA says that children who receive special education should learn in the least restrictive environment. This means they should spend as much time as possible with peers who do not receive special education. IDEA says two things about LRE that are important to understand when working with the IEP team: 1) your child should be with kids in general education to the "Maximum extent that is appropriate". 2) Special classes, separate schools or removal from the general education class should only happen when your child's learning or thinking difference–his "disability" under IDEA–is so severe that supplementary aids and services can't provide him and appropriate education (Morin, 2019).

Positive Behavior Intervention and Supports. Positive behavioral interventions and supports (PBIS) is a way for schools to encourage good behavior. With PBIS, schools teach kids about behavior, just as they would teach about other subjects like reading or math. The focus of PBIS is prevention, not punishment (Lee, 2014).

Reinforcement. “Reinforcement is the process in which a behaviour is strengthened by the immediate consequence that reliably follows its occurrence”. To “strengthen” a behaviour is to make it occur more frequently - when a type of behaviour is followed by reinforcement there will be an increased future frequency of that type of behaviour”. (Malott & Trojan-Suarez, 2004).

Social Emotional Learning. Social and emotional learning (SEL) is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (“What is SEL?”, 2019).

Chapter 2: Review of Literature

The purpose of this literature review is to examine the relationship between Autism Spectrum Disorder (ASD) and aggressive behaviors, along with examining the effectiveness of implementing different teaching strategies that aim to help reduce aggressive behaviors in children who are diagnosed with ASD. This chapter is organized into four major sections*:* *teacher view, student view*, *behaviors,* and *strategies.* Studies within each group are presented in chronological order, beginning with the oldest study.

Table 1

Summaries of Studies Used for Review

Author (Date)	**Meta-Analysis, Quantitative, or Qualitative**	**Number of Participants and Setting**	**Procedure**	**Results**
Rodriguez, Saldana, & Moreno (2012)	Meta-Analysis	69 Special Education teachers	Self-Directed Questionnaires	Teachers tend to feel supported and positive about their work when they are in within a classroom with students they anticipated working with (i.e. a special education teacher teaching a group of students who are diagnosed with ASD)
Corona, Christodulu, & Rinaldi (2017)	Qualitative, Quantitative	93 school professionals	Series of surveys given to each participant, Pre and Post data collection, Three-Part phase series of professional development	Professionals working with students who have ASD report having a higher self-efficacy once they feel better equipped and trained on how to complete the tasks of their job.
Robertson, & Frydenberg (2011)	Qualitative, Quantitative	6 adolescents diagnosed with ASD, Parents of the adolescents	Self-reported rating scales, Written response survey	Participants have an average perception of wellbeing and appropriate social skills. The use of coping skills differs from adolescents diagnosed with ASD and those who are not diagnosed the same.
Pouw et al. (2013)	Quantitative	133 middle school students, 67 of whom were diagnosed with ASD, Parents of all participants	Self-Reported questionnaires related to aggressive behaviors and feeling of empathy. Parents were given a Child Symptom Inventory (CSI) to rate their child's behavior.	Students with ASD had a lower level of personal understanding compared to students who are typically developing.

Table 1 (continued)

Presmanes Hill et al. (2014)	Quantitative	400 children between the ages of 2-16 years old, all diagnosed with ASD, parent questionnaire	Questionnaires regarding physical and verbal aggression, clinician administered observation	Children who have a limited ability to verbally communicate present more physically aggressive behaviors.
Farmer et al. (2015)	Quantitative	657 children between the ages of 1-21 years old, 414 of whom are diagnosed with ASD	Standardized rating scales, researcher or parent completed	Children who are diagnosed with ASD along with a comorbid disability are more likely to have aggressive behaviors than children who do not have a disability diagnosis.
Brosnan, & Healy (2011)	Meta-Analysis	31 children between the ages of 3-18 years old	Review of Literature	The use of Applied Behavior Analysis (ABA) was effective in limiting and/or reducing inappropriate behaviors in children with ASD.
Boesch et al. (2015)	Qualitative	1 14-year-old male diagnosed with ASD	Observation, training sessions of interventions	The tested intervention to reduce the participants self-injurious-behaviors was found to be successful.
Espelage, Rose, & Polanin (2015)	Qualitative, Quantitative	123 sixth grade students	A SEL curriculum intervention was taught throughout a school district, Student surveys for pre and post data collection	The authors of the study feel that there is an imperative need for students with disabilities to have an SEL curriculum. There was a decrease in students reporting the feeling of being bullied after the curriculum was taught.
Floress, Zoder-Martell, & Schaub (2017)	Quantitative, Qualitative	1 8-year-old female diagnosed with ASD	Survey using a Likert rating scale, intervention training sessions	The SSRT model was effective in teaching the participant appropriate social skills for targeted negative behaviors.

Teacher View

Rodriguez et al. (2012) investigated the attitudes of special education teacher's working with students who are diagnosed with Autism Spectrum Disorder (ASD). The study consisted of 69 special education teachers who each held a bachelor-level degree in special education. Forty of the teachers were located in mainstream schools. Twenty of the teachers had been working in special education for less than 4 years, and 29 of the teachers had not previously worked with students with ASD.

All the teachers were given two questionnaires, one regarding their personal attitude and the other regarding needs they feel they have related to their job. The attitude questionnaire was used to assess the attitude of the teacher who is working with a student who has ASD. The needs questionnaire asked teachers to identify their perceived needs for working with students with ASD.

The attitude questionnaire was composed of 21 items. The following areas were assessed: parent perceptions of their child with ASD, expectations the teachers have for their student, and perception of their emotions while working with children with ASD. The data was collected in a cluster analysis. The data of the questionnaire presented satisfactory consistency.

The needs questionnaire was composed of 22 items. The following areas were assessed: need for information, need for support, need for resources, need for help explaining student needs to coworkers. The questionnaire presented satisfactory consistency.

The attitude questionnaire was analyzed using a t test ($p < .001$). The t test was conducted to separate the teachers into groups of attitudes, those who feel least positive to most positive with regards to their current job. Predictors of attitude helped to further analyze the two grouping of scores, such as support received in their classroom and years of working as a special education teacher with students who have ASD. This grouping gave reliable results for the group. ANOVAs were conducted for the needs questionnaire. ANOVA identified that there are differences of needs among the teachers. The results were significantly significant ($p < .001$). The results indicated that special education teachers in mainstream schools identify more needs than special education teachers in other school settings. Teachers in mainstream schools showed

a demand for a need to know more information regarding ASD and teaching strategies for their students.

Overall, teachers who are new to teaching ASD strategies are more likely to have a negative attitude about their job than teachers who have been teaching special education for a period of time. One of the findings from this study indicates that when teachers are in network with each other, specifically in an ASD network, they are more likely to have a positive attitude about their work in the classroom. Another finding from this study indicates that teachers who are working in a special education classroom with only special education students, are more likely to feel settled in their job. Teachers who work in an inclusion mainstream classroom feel less settled about their work and tend to feel more challenged by the students and the students' aggressive behaviors. This leads to the conclusion that different educational settings require different needs for their teachers.

Limitations of this study include a small sample size, questionnaire results, and a wide variety of educational settings with a small representation of staff from each setting. The study should be replicated with a larger sample size to better represent the special education teacher population. The study should also include more schools to gather data from, with more teachers from each setting in the special education field.

Corona et al. (2017) investigated self-efficacy of school professionals working with students who have Autism Spectrum Disorder (ASD) by providing training on the Prevent-Teach-Reinforce (PTR) model and other evidence-based practices. The study consisted of 93 school professionals from 10 schools across New York State. Five to 11 teachers were represented from each school, with each teacher having participated in a series of training

sessions regarding PTR and other teaching practices for teaching students with ASD. Ninety percent of the participants were females, 93% of the participants had an advanced degree, and 71% of the participants have worked at the same educational site for 5 or more years.

A series of surveys and professional development trainings were conducted for this study. The surveys were regarding the participants' knowledge of teaching students with ASD, their self-efficacy ratings, and their demographics. The professional development training of PTR was given in a three-part series to the participants.

As part of this study, two questionnaires were given to the participants. This first questionnaire was the *Autism Knowledge Questionnaire.* There are 16 items were related to ASD characteristics, diagnostic criteria, and Positive Behavior Support strategies. The second questionnaire was the *Autism Self-Efficacy Scale for Teachers (ASSET).* The questionnaire included 30 items assessing the self-efficacy of teachers who work with students who have ASD. The items were related to asking how certain the participants were with their job and that they could carry out their assigned tasks for their role in the school. The questionnaires were given two times; once before the PTR trainings and once after. In this study, 80% of the participants completed the two surveys and submitted their results.

At the time of the professional development trainings, participants completed three phases of evidence-based practice trainings following the PTR model throughout a 2-3-month period. During Phase One (*Prevent)* of the model, participants met for 10 hours over a 2-day session meant to be an introduction and planning session. In this session, participants set goals, learned how to conduct a Functional Behavior Assessment (FBA), and learned how to collect data for this study. Phase Two *(Teach)* for the participants included writing an FBA, interpreting

data collection on behaviors, and learning how to create an intervention plan for students. Participants met for 10 hours over 2 days for this phase as well. Following Phase Two, staff were asked to collect data for 3-4 weeks regarding their student's intervention plan. Phase Three *(Reinforce)* was a 1-day training where participants reviewed their interventions and data collection, along with discussion on how to continue to develop effective intervention plans.

Overall, the study concluded that school professionals working with students who have ASD report having a high self-efficacy after feeling better equipped and trained on how to complete the tasks of their job. There was a significant correlation found between prior training of ASD and years of working with students who have ASD and the self-efficacy of school professionals ($r = .584$, $p < .001$). Analysis of a professional's knowledge of ASD was found to have increased after completing the trainings, along with an increase in their self-efficacy ($M = 12.38$, $SD = 2.09$).

Limitations of this study include a lack of finding if professional development trainings provide a positive impact for professionals, reliance on the completion of self-reported questionnaires, challenges in data collection (participant's data collection), and the sample of participants coming from just one localized area of New York, US. The study should be replicated with a larger sample size, larger geographical range of participants, and should be conducted with a larger range of school professional's ASD knowledge. Training and profession development on a specific content area, in this case FBAs for students with ASD, was found to be beneficial for the participant and helped improve their self-efficacy ratings.

Summary

This section presented the findings of two studies that evaluated both the teacher's experience working with students who are diagnosed with ASD and other disabilities and teacher's reported self-efficacy. Table 2 provides a summary of these findings.

Table 2

Summary of Teacher Efficacy Studies

Author (Date)	**Meta-Analysis, Quantitative, or Qualitative**	**Number of Participants and Setting**	**Procedure**	**Results**
Rodriguez, Saldana, &Moreno (2012)	Meta-Analysis	69 Special Education teachers	Self-Directed Questionnaires	Teachers tend to feel supported and positive about their work when they are in within a classroom with students they anticipated working with (i.e., a special education teacher teaching a group of students who are diagnosed with ASD)
Corona, Christodulu, & Rinaldi (2017)	Qualitative, Quantitative	93 school professionals	Series of surveys given to each participant, Pre and Post data collection, Three-Part phase series of professional development	Professionals working with students who have ASD report having a higher self-efficacy once they feel better equipped and trained on how to complete the tasks of their job.

Robertson and Frydenberg (2011) investigated the coping strategies of students with Autism Spectrum Disorder (ASD) and the perceived effectiveness of their coping strategies. The study consisted of six adolescents, all of which were male between the ages of 13 and 17. The participant's parents confirmed diagnoses of Asperger Syndrome (three participants), high functioning autism (two participants), and ASD (one participant).

The participants were each given the Adolescent Coping Scale (ACS) which measured their coping strategies through self-report. Parents were given the same scale, but the parent version of the self-report form asked where they believed their child would be rated.

Participants were further assessed given a written response survey. The participants were asked to answer questions like the following: “What problems do you feel you have with relationships with other people, such as friends, parents, teachers, and other people your age? How do you deal with these problems?” The answers given to these questions were used in a follow-up interview at the end of the duration of the study.

Social skills of the participants were investigated through the Secondary Level Student Form of the Social Skills Rating system (SSRS). The SSRS consists of 39 items that are relevant to the areas of Cooperation, Assertion, Empathy, and Self-Control (p. 138). The Personal Wellbeing Index (PWI) was used to measure the wellbeing of the participants, containing eight items. All of the participants completed this form.

The scores of the participants rating scales were compared to average scores of the given assessments manuals. When compared to the assessment average scores, there is variability between the assessment scores and the scores of the study’s six participants. There were discrepancies found between the self-report and parent-report forms. The parents of the participants ranked their child’s coping strategies differently than their child. The participants rated their coping strategies, such as keeping to self, focus on self, and worrying, exceedingly similar to the ratings of the assessment manual’s average scores.

The study concluded with a phone interview to each of the six participants. The interview lasted approximately 10 minutes for each of the participants. The questions asked during the interview and the given answers were each transcribed and categorized for assessing purposes. The responses were related to how the participants rate their use of coping strategies and the perceived effectiveness.

Overall, the study found that the participants' perceived wellbeing and social skills were related to the ratings of the assessment manual's averages. The study did provide evidence that the participants do demonstrate different coping strategies than the assessment average, leading the authors to conclude that there is a difference in use of coping strategies for those diagnosed with ASD.

Limitations of this study include a small sample size, the use of self-reported assessment, and comparisons to an assessment average that is not clear for this study as to who the participants are. The study should be replicated with a much larger sample size and further assessments by psychologists on determining the reasoning for specific uses, or lack of use, for coping strategies.

Pouw et al. (2013) investigated the extent to which one diagnosed with Austism Spectrum Disorder (ASD) and those who are typically developing (TD) differ between affective and cognitive empathy and any association with reactive and proactive aggression. The study included 133 middle school aged children with an IQ score of 80 or above. The children were in one of two groups: 67 (8 girls, 59 boys) were diagnosed with ASD (high functioning), 66 (9 girls, 57 boys) were TD.

The two groups completed self-reported questionnaires that asked them to rate their own aggressive behavior level using the *Self Report Instrument for Reactive and Proactive Aggression* (IRPA). The IRPA consists of 38 items, 18 proactive behaviors and 18 reactive behaviors. The two groups also answered the self-reported *Empathy Questionnaire*, consisting of 21 items that were answered with a 3-point scale. Parents of all participants (ASD and TD) were asked to complete the Child Symptom Inventory (CSI) behavior rating scale of their child.

Statistical t tests were performed to determine any statistical significance between the two groups and their aggression and empathy levels. The ASD and TD groups significantly differed on the self-reported surveys. The parents of the ASD group rated higher scores for the empathy ratings than their child's self-reported form showed compared to the parents and children of the TD group.

The t tests indicated that the TD group had a negative correlation with reactive aggression and contrastingly, the ASD group had a positive correlation between empathy level and reactive aggression. The personal understanding of personal distress differed between the two groups as well. The TD group demonstrated a higher level of personal understanding than the ASD group. The study further indicates that there is a significant difference between the two groups and their empathy and aggression levels.

Overall, children with ASD do demonstrate a reactive aggression that is different than those who are TD. The results should be interpreted differently for the ASD children than those of the TD children. The aggression questionnaire indicated that there is a difference in impaired emotional regulation for the two groups. Children with ASD were found to have more aggressive behavior and lower empathy levels, which were also found to be related given the t test results.

Limitations of this study include a small sample size, observational study (parent questionnaire), and self-reported results. The self-reported questionnaire assumes that the child completing the survey has the capability of appropriately self-identifying one's own emotions and behaviors. Given the sample included middle school aged children, it is not likely that the child accurately answered the questionnaire for the purpose of the study. The study should be

replicated with similar measures and further psychological testing to determine a reasoning for the ASD group's physical aggression. The replicated study should also include a larger sample.

Summary

This section presented the findings of two studies that evaluated the way students who are diagnosed with ASD rate themselves on a series of scales and how they identify with their disability. Table 3 provides a summary of these findings.

Table 3

Summary of Student/Child Studies

Author (Date)	**Meta-Analysis, Quantitative, or Qualitative**	**Number of Participants and Setting**	**Procedure**	**Results**
Robertson, & Frydenberg (2011)	Qualitative, Quantitative	6 adolescents diagnosed with ASD, Parents of the adolescents	Self-reported rating scales, Written response survey	Participants have an average perception of wellbeing and appropriate social skills. The use of coping skills differs from adolescents diagnosed with ASD and those who are not diagnosed the same.
Pouw et al. (2013)	Quantitative	133 middle school students, 67 of whom were diagnosed with ASD, Parents of all participants	Self-Reported questionnaires related to aggressive behaviors and feeling of empathy. Parents were given a Child Symptom Inventory (CSI) to rate their child's behavior.	Students with ASD had a lower level of personal understanding compared to students who are typically developing.

Presmanes Hill et al. (2014) investigated the prevalence of aggressive behaviors in children with Autism Spectrum Disorder (ASD); and whether children with aggressive behaviors receive more of the following: medical interventions, have more behavioral functioning impairments, and have more comorbid disabilities compared to children that do not have ASD. The study consisted of 400 children who were between the ages of 2-16 years old. All of the

participants were enrolled in the Autism Speaks Autism Treatment Network (ATN) at Oregon Health and Science University.

A series of questionnaires were used in this study. Parents of the children in the study were asked to complete questionnaires regarding their child's behavior, medical history, and sleeping habits. Clinicians administered standardized observation and cognitive assessments to the children for the purpose of this study as well.

The behavior questionnaire was composed of 19 items for preschool age children and 18 items for school age children. The questionnaire assessed both physical aggression and verbal aggression in the child. Some examples of questions include "gets in many fights," "physically attacks people," "temper tantrums or hot temper." The data were analyzed using a t test ($M = 50$, $SD = 10$). The data of the questionnaire presented a positively skewed distribution of scores.

Cognitive functioning for each participant was assessed using the *Mullen Scales of Early Learning.* The scale was used to assess the cognitive performance of the participants. With a varied range of scores on the scale, the assessors created categories for the participants: average to above average IQ, below average range, and intellectual disability range. The data was analyzed using a t test (n = 323, n = 142 scoring minimal score of 20–42%). The results presented a significantly positively skewed relationship.

Overall, the study concluded that there is a significant association between aggressive behavior and cognitive level (IQ). If a child has a lower IQ level, the study found that the child is more likely to have aggressive behaviors. Verbal ability holds a strong indication for aggressive behaviors. The study determined that if a child has a limited ability to verbally communicate, the child would present more physically aggressive behaviors than another child would with a larger

vocabulary. The study also found three predictors of aggressive behaviors based on the questionnaires: sleep, internalizing, and attention problems in children. Using a t-test, these predictors held statistically significant. In this study, 25% of the participants have a medical diagnosis of ASD. The results of the study determined that children who are diagnosed with ASD and have a limited vocabulary may become highly frustrated, leading to more aggressive behavior. The study discussed briefly, in comparison to children who do not have an ASD diagnosis, those who have ASD are more likely to be impaired socially. Having a social impairment can lead to aggressive behaviors as well, according to the study.

Limitations of this study include a young age range of participants (m = < 6 years old), primarily white children which limits the generalizability of the study, questionnaire variability, and missing data from some of the participants and their families. The study should be replicated with a larger range of age to better represent the aggressive behaviors as children get older. The study should also include a more diverse population to increase the ability to generalize the data.

Farmer et al. (2015) investigated aggression in autism spectrum disorders (ASD) and how it compares to other groups (i.e., other disabilities, typical peers). The study consisted of 414 children with ASD (36 participants had a comorbid diagnosis of attention deficit hyperactivity disorder) and 243 clinic-referred children who do not have ASD (85 participants had a diagnosis of attention deficit hyperactivity disorder). The participants were all between the ages of 1 to 21 years old. The study was conducted at seven different institutions across the United States: Ohio State University, Nationwide Children's Hospital of Columbus, University of Missouri, University of Illinois at Chicago, University of Utah, Seattle Children's Hospital, and the Children's Medical Center of Dayton. These institutions were chosen for this study because they

are all research-based sites that had selected their own participants based on subjects showing ASD symptoms, no particular features of ASD were recruited.

Participants of this study were assessed using multiple standardized scales. The scales were used to determine a child's hostility and aggression, and to determine differences between the ASD group and the comparison group. Either a researcher or a parent completed the scales.

The *Children's Scale for Hostility and Aggression: Reactive/Proactive* (C-SHARP) was used for this study, which consists of five subscales. The subscales include items related to verbal aggression, bullying, covert aggression, hostility, and physical aggression. The study used standardized scores, which take into consideration only physical-type behaviors. The results of the scores were interpreted using a between-group model. Scores that were close to 70 on the C-SHARP were considered clinically significant.

The *Child Behavior Checklist Aggressive Behavior* (CBCL Aggressive Behavior) is an assessment that has three parts to be completed: one by the parents, one by a teacher, and one by a child. Scores were assessed using a Likert Scale. The results of this assessment were compared to those of the C-SHARP assessment. Results were compared by a Chi-square test.

The Chi-square test results were statistically significant. Younger participants who also had a lower IQ had significantly lower scores on Verbal Aggression and Covert Aggression. Participants with lower adaptive skills had statistically significant higher scores in bullying and physical aggression.

Overall, the study found that children diagnosed with ASD, other disabilities such as Oppositional Defiance Disorder (ODD), or having a comorbid diagnosis of ASD and another disability such as ODD, are more likely to have aggressive behaviors than children who do not

have a disability diagnosis. Aggressive behaviors in children with ASD remains a concern for parents and teachers.

Limitations of this study include heterogeneous groups, a large sampling of participants from multiple sites could have led to inconsistent administration of tests, parent results could have been untrue due to a parent not wanting to be honest about their child's behavior, and the sample size included a large age range for participants. This study should be replicated with a stronger control group (participants who have no disability diagnosis), a smaller sample size and/or a sample from a more controlled setting to ensure the same administration of assessments.

Summary

This section presented the findings of two studies that evaluated the comorbidity of ASD and aggressive behaviors in children. Table 4 provides a summary of these findings.

Table 4

Summary of Aggressive Behavior Studies

Author (Date)	**Meta-Analysis, Quantitative, or Qualitative**	**Number of Participants and Setting**	**Procedure**	**Results**
Presmanes Hill et al. (2014)	Quantitative	400 children between the ages of 2-16 years old, all diagnosed with ASD, parent questionnaire	Questionnaires regarding physical and verbal aggression, clinician administered observation	Children who have a limited ability to verbally communicate present more physically aggressive behaviors.
Farmer et al. (2015)	Quantitative	657 children between the ages of 1-21 years old, 414 of whom are diagnosed with ASD	Standardized rating scales, researcher or parent completed	Children who are diagnosed with ASD along with a comorbid disability are more likely to have aggressive behaviors than children who do not have a disability diagnosis.

Brosnan and Healy (2011) investigated a comprehensive examination of aggressive behavior interventions for individuals with development disabilities related to Autism Spectrum Disorder (ASD) and intellectual disabilities (ID). The 3study examined different interventions

for ASD, with a focus on Applied Behavior Analysis (ABA Therapy). The 31 participants (26 male, 5 female) of the examined research were between the ages of 3 and 18 years old with a primary diagnosis of ASD.

For this study, there were three categories that the studies to be examined were drawn from. The first of these categories included research in behavior antecedent manipulations and changing instructional context, such as introducing time delays to prompts and schedules. The second category included research on differing reinforcement strategies and communication interventions. The third and final category examined research related to consequential control, including behavior reduction strategies. Upon reviewing the research, common behaviors that caused a need for intervention included biting, kicking, pinching, and scratching.

Overall, the study concluded that with the use of an intervention was effective in limiting and/or reducing inappropriate behaviors regardless on which of the three categories the intervention was placed in. The studies not only found that negative behaviors decreased, but there was an increase in appropriate behaviors that were desired outcomes of the interventions. ABA therapy was found to be highly effective for reducing inappropriate behaviors with students who have ASD.

Limitations of this study include a limited number of studies examined, the use of three categories of interventions, and that there was no data for the actual studies included in the final report. Although this study was a comprehensive examination of interventions, it would be beneficial if the study was redone with a narrowed focus on one of the three categories, along with including more data and summaries of the specific interventions used.

Boesch et al. (2015) investigated the use of behavioral training, such as functional communication training (FCT) and a delayed reinforcement schedule to attempt to decrease self-injurious behaviors (SIBs) in children with severe autism. The study consisted of one participant, a 14-year-old male who has severe autism. The participant was chosen for this study because of his autism diagnosis, limited verbal skills, and demonstration of SIBs. The participant was observed at, and participated in, sessions related to this study in his high school classroom setting.

A series of intervention and training sessions were conducted for this study. The interventions were used to determine the participants frequency of self-injurious behavior (face slapping). A Functional Behavior Assessment (FBA) was created to identify the participants baseline of self-injurious-behavior and to determine the function of the behavior. Given the FBA, a found reinforcement for the participant was to be the use of wrist weights. When conducting the interventions, a changing-criterion design was used (ABA). Teacher and staff interviews were conducted with regards to the participants' self-injurious behavior.

The interventions were conducted through a series of phases. In each phase, the participant was expected to show complete follow through of a task or demand without demonstrating any self-injurious behavior for a given amount of time. Given the FBA and intervention phases, it was found that the participant felt reinforced when allowed to wear wrist weights or work one-on-one with a paraprofessional. Throughout the phases, the participant was taught to ask for weights without hurting himself. This overall helped the participant decrease his self-injurious behavior.

Overall, the study concluded that the behavior intervention was successful for eliminating self-injurious behavior for the participant. The participant was demonstrating significantly less behaviors during the training sessions and was able to complete tasks and demands without hitting himself. One critical element to the results of this study is believed to be the targeting of one specific behavior, in this study it was face slapping. The use of an FBA was found to be important for determining the target behavior for the interventions.

Limitations of this study include a sample size of one participant, replication of the study was not found, and the reinforcements for the training could have been an unintentional negative reinforcement. The study should be replicated with a larger sample size and larger age range of participants, and it should be conducted in a range of settings. Reinforcements for the participants should also be made clear and be agreed upon with the researchers.

Espelage et al. (2015) investigated the effects of Second Step: Student Success Through Prevention (SS_STSTP). The study consisted of sixth-grade students with disabilities in two of five school districts that were using a social emotional learning (SEL) curriculum. One hundred and twenty-three students from 12 different schools in the two school districts in Illinois were included for this study: 47 students were in intervention schools and 76 students were in control schools.

The students at the intervention school were introduced to the SS-SSTP program that was composed of 15 lessons at a sixth-grade level and 13 lessons at a seventh and eighth grade level. The first lessons that were taught included a focus on empathy and communication, bullying, emotion regulation, cyberbullying, sexual harassment, problem solving, goal setting, and lastly substance abuse prevention. The lessons were taught in either one 50-minute or two 25-minute

sessions, weekly or semi-weekly throughout the school year. The students attending the control schools were taught the *P3: Stories of Us-Bullying program.* The curriculum was composed of two videos and educational resources for teachers to use throughout their lesson plans.

The students were chosen due to their disability data being available for school districts in the Midwest. The students each had different disabilities and were identified as different races. There were no found significant differences between the students in the two different groups. All students, regardless of disability, were selected for inclusion. The schools were randomly assigned to the control group or intervention group. The 123 students selected were between the ages of 11 and 12. Parents were asked to sign a consent waiver for their child to participate. There was an 86% participation rate at the schools.

A longitudinal study was performed for the purpose of this study. Students were given a series of surveys to complete throughout the course of the study. The survey used was composed of four sections: demographics, verbal/relational bullying perpetration, peer victimization, and physical aggression. The first time the students were given the survey, the following was found. On the bullying scale, students who reported a high level of feeling bullied were significantly more likely to be nominated as a bully by their peers who did not report a high level of feeling bullied. The peer victimization scale asked students to rate how often they were the victim of bullying. The physical aggression scale asked students to rate how often they got into a physical fight. This scale had a low correlation with the victimization scale and had a moderate correlation to the bullying scale.

The survey was given to the students on four separate occasions. The results were gathered in a linear growth model. The study indicated that after completing the four surveys,

students in the intervention schools had scores significantly decrease on the bullying scale as compared to those in the control schools. There was no found significance of the intervention's ability to decrease the amount of bullying or the amount of one feeling bullied compared to the control group. The study also indicates that there was no significance between the intervention introduced and physical aggression. There was no difference found between the intervention schools and the control schools.

Overall, the results of the four surveys given to the students in both of the groups (schools using the SS_STSTP and *P3: Stories of Us-Bullying program* curriculums) revealed there was no significant difference in the social emotional learning for the students with disabilities. The authors of the study report that they still feel direct instruction of SEL curriculum is imperative to students who have disabilities (p. 307). The authors determined that there was a decrease in students reporting the feeling of being bullied and they feel that SEL curriculum can be attributed to this result (p. 308).

Limitations of study include the small sample size of students with disabilities, the results of the surveys were self-reported by the students, and students were taught the curriculum in different classroom settings –some in a self-contained classroom and others in a general education setting with more students. The study should be replicated with more controls of the variables, specifically looking at the effects of SEL curriculum and the presence of bullying.

Floress et al. (2017) investigated the effectiveness of Social Skills plus Relaxation Training (SSRT) on increasing the overall frequency of three targeted behaviors for a participant with Autism Spectrum Disorder (ASD). The study was conducted because the researchers felt that demonstrating appropriate social skills is a daily challenge for children with ASD. SSRT is

used to teach appropriate social skills, hence the research investigated the effectiveness of SSRT. The participant was an 8-year-old female with ASD. The intervention trainings took place three times a week in 30-60-minute sessions with the researcher and general education teacher after school.

For this study, a Social Skills Rating System was used to determine target behaviors for the study. The Social Skills Rating System was made up of five items related to a behavior as follows: greeting others, complimenting others, listening to others, expressing empathy, and joining others in play. These five behaviors were chosen because they were specific concerns of the participant's teacher, along with being common social behaviors for those with ASD. A Likert scale was used for the rating system to determine three target behaviors for the intervention.

Following the identification of the targeted behaviors, SSRT trainings began with the participant. The training sessions followed the SSRT model with on a focus on three targeted behaviors as identified through the Social Skills Rating System. The three targeted behaviors for the intervention included complementing others, expressing empathy toward others, and listening to others. There are four steps to the SSRT training sessions that took place. First is to introduce the session, then teach/review deep breathing (relaxation), then teach/review targeted social skills, and lastly practice the social skills. During the teach/review steps, the desired behaviors are modeled for the participant. After each session, the participant was assessed given a data collection sheet on the number of times she demonstrated the desired appropriate behavior out of the total number of opportunities given for each session.

Overall, the study concluded that the SSRT model was effective in teaching appropriate social skills for targeted negative behaviors. The participant's skills were maintained after a period of time, which can be attested to the effectiveness of the SSRT model. The results were found by averaging the participant's correct responses to the given scenarios and practice opportunities during each training session and practice session. The results were given in percentages to show growth and/or regression in the targeted behaviors. Complimenting others had a base score average of doing so 0%, an intervention practice score of doing so 76%, a maintenance score of doing so 97%. Expressing empathy had a base score average of doing so 28%, an intervention practice score of doing so 71%, a maintenance score of doing so 63%. Listening to others had a base score average of doing so 16%, an intervention practice score of doing so 92%, a maintenance score of doing so 97%.

Limitations of this study include a maintenance period that occurred after summer vacation creating an opportunity for regression of the learned skills. Another limitation is there was only one participant for the study, therefore creating an absence of peer interaction that could have allowed for organic use of the learned skills–meaning the only practice of skills was with one familiar adult. A third limitation of the study is that the conditions of the research were unnatural in that the skills were learned after school (not a typical time for social interactions) and in a conference room (not a typical social setting). These limitations prompt the questioning of how the results would have differed with a more natural social setting (with peers, in the participant's classroom, training with teacher) and what the effectiveness of SSRT would be with a different setting. This study should be done again with a higher number of participants with varying ages. The new study should also provide SSRT specifically for one targeted behavior per

study, as opposed to SSRT for multiple targeted behaviors like the current study. To further determine the effectiveness of teaching appropriate social skills via SSRT, the new study should include other interventions, and do so in a more natural social setting.

Summary

This section presented the findings of four studies that evaluated the effectiveness of teaching behavioral interventions to children with disabilities, with a primary focus on children with ASD. Table 5 provides a summary of these findings.

Table 5

Summary of Intervention Studies

Author (Date)	**Meta-Analysis, Quantitative, or Qualitative**	**Number of Participants and Setting**	**Procedure**	**Results**
Brosnan, & Healy (2011)	Meta-Analysis	31 children between the ages of 3-18 years old	Review of Literature	The use of Applied Behavior Analysis (ABA) was effective in limiting and/or reducing inappropriate behaviors in children with ASD.
Boesch et al. (2015)	Qualitative	1 14-year-old male diagnosed with ASD	Observation, training sessions of interventions	The tested intervention to reduce the participants self-injurious behaviors was found to be successful.
Espelage, Rose, & Polanin (2015)	Qualitative, Quantitative	123 sixth grade students	A SEL curriculum intervention was taught throughout a school district, Student surveys for pre and post data collection	The authors of the study feel that there is an imperative need for students with disabilities to have an SEL curriculum. There was a decrease in students reporting the feeling of being bullied after the curriculum was taught.
Floress, Zoder-Martell, & Schaub (2017)	Quantitative, Qualitative	1 8-year-old female diagnosed with ASD	Survey using a Likert rating scale, intervention training sessions	The SSRT model was effective in teaching the participant appropriate social skills for targeted negative behaviors.

Chapter 2 Summary

I reviewed 10 studies in this chapter that examined the effectiveness of different approaches to helping reduce children's aggressive behavior who are diagnosed with ASD. Conclusions and recommendations are discussed in Chapter 3.

Chapter 3: Conclusions and Recommendations

The purpose of this paper is to provide educators in both a general and special education setting with strategies they could potentially integrate into their classrooms when aggressive behaviors related to ASD are present in their students. It was discussed that there is a teacher burn-out rate, and that feeling unequipped for challenges that could arise in the classroom due to those behaviors is a contributing factor (Corona et al., 2017). Chapter 1 included background information on what Autism Spectrum Disorder (ASD) is defined as, what the purpose of implementing an SEL curriculum or other strategies into a classroom is, and provided an overview of aggressive behaviors and how the aggressive behaviors presented in individuals with ASD can affect themselves and their educators. Chapter 2 summarized the findings of 10 research articles which explained the views of educators and students related to their jobs and aggressive behaviors, along with the effectiveness of implementing SEL curriculums and other therapies alike, such as ABA therapy, into the classroom. In this chapter, I will discuss the studies examined; the conclusions made and will provide recommendations for future research.

Conclusions

The studies examined for this paper were categorized into four groups for the purpose of review. The studies examined how teachers and students feel about displayed aggressive behaviors in relation to the overall job of teaching special education. The studies also examined the use of SEL curriculums in the classroom and other therapies that could be used in an attempt to decrease aggressive behaviors related to ASD. There were a variety of research designs, settings, and questionnaires used throughout the studies.

Two of the 10 studies examined the teacher's perspective of working in education with students who have disabilities, ASD specifically, and the efficacy of the teacher. The study conducted by Rodriguez et al. (2012) had 69 participants. Each participant completed a set of two questionnaires. The study conducted by Corona et al. (2017) had 93 participants. The participants were trained in Prevent-Train-Reinforce and other evidence-based practices. The studies conclude that teachers and school professionals feel better about their work in the classroom when they feel adequately prepared for all parts of their job, such as working with students who display aggressive behaviors.

Two of the 10 studies examined the student's perspective of themselves, some participants who have an ASD diagnose, compared to either students who have no disability diagnose or a different diagnosis. Data for these two studies were collected by using questionnaires and self-report forms. Robertson and Frydenberg (2011) conducted a study with six participants. Each participant, and their parents, completed a self-evaluation form related to coping strategies, and the use of coping strategies. Pouw et al. (2013) conducted a study consisting of 133 participants. The participants completed self-reported questionnaires. The studies conclude that students diagnosed with ASD have a different understanding for the use of coping strategies to regulate behaviors. Students with ASD also have a low level of personal understanding related to their aggressive behaviors.

Two of the 10 studies examined the relationship between ASD and aggressive behaviors. Presmanes Hill et al. (2014) conducted a study with 400 participants. The participants were given self-reflection questionnaires to fill out. It was found that children with ASD, and who have a limited ability to verbally communicate, present more physically aggressive behaviors towards

themselves and others. Farmer et al. (2015) conducted a study with 657 participants. Each participant was rated on a standardized scale that either the family or researcher completed. The study concluded that children who have an ASD diagnosis with a comorbid disability are more likely to have aggressive behaviors than children who do not have a disability diagnosis.

The final four of the 10 studies examined the effectiveness of different practices for schools and educators to use in the classroom setting that would help distinguish potential aggressive behaviors. Brosnan and Healy (2011) wrote a review of literature that consisted of studies totaling 31 child participants and the use of Applied Behavior Analysis (ABA) therapy. Through their research, Brosnan and Healy conclude that ABA therapy is effective in limiting and/or reducing inappropriate behaviors in children with ASD, in which aggressive behaviors can be categorized as such. Boesch et al. (2015) observed a 14-year-old male with ASD for the purpose of their study. The researchers tested an intervention in hopes to reduce self-injurious behaviors. Boesch et al. (2015) conclude that their intervention of using reinforcement and replacement behaviors is successful in reducing self-injurious behaviors. Espelage et al. (2015) researched the implantation of an SEL curriculum throughout a school district and its sixth-grade classrooms. The researchers found that there is a benefit for students with disabilities to be taught skills from a SEL curriculum to increase their social and behavioral skills. In the final study for this paper, Floress et al. (2017) conducted a series of intervention training sessions for an 8-year-old female who has ASD. The researchers conclude the use of the SSRT model was effective in teaching the participant appropriate social skills.

Recommendations for Future Research

Throughout my research on the effects that therapies and strategies for reducing aggressive behaviors related to ASD have, the studies provided data showing that the use of therapies and SEL curriculums is effective in reducing aggressive behaviors. The studies included a vast variety of participants. Some of the studies had many participants, but they were from a small geographical area. Some of the studies were only with one participant, or with entire school districts.

Future research should focus more on concentrated diagnoses of ASD and that are primarily comorbid with aggressive behaviors. Researchers should also expand geographically when conducting the studies to broaden the synopsis to these therapies and curriculums with regards to their effectiveness.

It would also be beneficial for more SEL curriculums and therapies to be researched. There are numerous SEL curriculums, but very few have been studied in relation to decreasing aggressive behaviors. Given that there is currently increasing special education teacher burnout rate and with the knowledge that there are curriculums that *could* help, it would be beneficial for schools and their districts to provide educators with more direct research on the SEL curriculums and provide training to the teachers in the curriculums.

Implications for Practice

As a special education teacher myself, in a highly behavioral program, I see aggressive behaviors from my ASD students every day. Moreover, so do my coworkers. Seeing how the students feel before, during, and after a behavior is enough to show that there is a need for teachers to be equipped and trained with strategies to reduce those behaviors. The district I teach

in has a SEL coordinator in almost all of our seven schools because our district knows how important that single lesson or curriculum could be for our students.

When deciding what SEL curriculums or therapies to choose, educators should reach out to their district representatives. It is my understanding that most districts offer training or purchase curriculums for teachers to use. It is also important for educators to know the student. It was discussed in the study with the 8-year-old, that she did best when working with a trusted adult (Floress et al., 2017). “The most important thing schools can do to foster these relationships is to have a culture that explicitly values adults nurturing relationships with students and providing teachers and school staff with the time, space, and occasions to interact repeatedly with individual students…” (Ed Trust & MDRC, 2021). It was discussed in the studies that when a student has a strong relationship with staff at school, the student can become more willing to learning new skills, such as SEL skills.

In my own teaching experience, I have found it very beneficial to teach SEL content to my students every day. Knowing that self-expression is a challenge for my students, teaching SEL provides an opportunity for them to practice naming their emotions; this practice provides the student the explicit naming of emotions to help them better communicate before displaying aggression. Teaching SEL content is something every teacher can do in his or her classroom. There is a multitude of curriculums for teachers to use as discussed in this paper, along with a vast variety of free resources online at sites like teacherspayteachers.com. I have personal connections to staff at Minnesota Autism Center (MAC). At MAC, the behavioral therapists provide ABA therapy to their clients. ABA therapy is a proven therapy to assist in the decreasing

of aggressive behaviors and practices reinforcement therapy as mentioned in a few of the studies in chapter two.

Summary

Students with autism spectrum disorders typically have limited expression skills, leading to a display of aggressive behaviors (Presmanes Hill et al., 2014). It is essential for educators to be well trained and to feel prepared to work with students, and especially students with ASD. Knowing that there is a growing and always developing list of SEL curriculums and therapies, teachers should not feel unprepared to teach their ASD students. It is disheartening that teachers who have a passion for education leave their job due to feeling unprepared and unequipped; there should be no reason for that anymore. Overall, there are effective strategies that educators can use in their daily practice to help reduce the amount of aggressive behaviors displayed by their ASD students, making school a better place for their students and for themselves.

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