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THE EFFECTS OF SOCIAL STORY INTERVENTIONS USED WITH AUTISTIC
STUDENTS

BY
SARAH OGREN

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF
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THE EFFECTS OF SOCIAL STORY INTERVENTIONS USED WITH AUTISTIC
STUDENTS

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APPROVED

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Abstract

Social-emotional learning is an essential part of everyday learning for students in the classroom. Providing students with evidence-based social-emotional learning practices, such as Social Stories, increases student academics and behavior. Students with autism spectrum disorder (ASD) have characteristics that interfere with social-emotional development. ASD students need support and teaching from adults to be successful. As students with autism grow, it is necessary for teachers to help them understand and cope with their emotions. Research shows that Social Stories positively impact communication and prosocial behavior for students with ASD while decreasing challenging behaviors. Social Stories teach ASD students in a supportive way, provide positive feedback, and protect their self-esteem. Social Stories are designed for individual specific behaviors that interfere with school success.

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CHAPTER I: INTRODUCTION

Social-Emotional Learning in the Classroom

Social-emotional learning has become an essential part of daily learning in the classroom. The National Education Association (2017) defines social-emotional learning as the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions (p. 1). Good programming in schools starts in preschool and goes through high school. Most unwanted behaviors can be avoided by helping students develop and manage their social and emotional skills through instruction within the classroom (National Education Association, 2017). Each student learns differently, so it is critical to understand the different learning styles of children and find evidence-based practices that would be most beneficial for each student.

All neurotypical humans struggle with social-emotional development, but they learn from real-life experiences and adapt to different situations by using their strengths to find coping strategies. For those with Autism Spectrum Disorder (ASD), this is more difficult. They need professional, individualized, and effective support to be successful. Each person with ASD is unique and may not always behave with the same mannerisms. Although they all may have their unique characteristics, most individuals with ASD tend to have difficulty with anxiety, social isolation, and emotions associated with grief and loss (Ahlers et al., 2017). Sometimes these emotions can affect students with ASD and their ability to succeed in the classroom.

As students with ASD grow older, it is essential to help them cope with their emotions. Social skills are said to be an essential part of teaching and supporting students with ASD, and it is essential to find an evidence-based intervention that has a positive outcome on the

social-emotional development and peer interactions ASD students encounter. One intervention that is used in many schools is Social Story interventions.

I have used Social Stories in my teachings to help my students understand the importance of appropriate communication skills when finding a task difficult within the classroom, to help my students understand the importance of helping and sharing within the classroom, and to help replace the challenging behavior of hitting people when becoming frustrated to walking away from the situation. Through my experiences using Social Story interventions in my classroom, I found how they can have a positive impact on my students by increasing their social skills and behaviors. When I implemented the Social Stories with my students, a lot of the time, more was needed than just simply reading the story to them once a day. I have attempted combining the Social Story with more positive reinforcement, more prompting during specific times of the day, or practicing with the skills taught during SEL direct instruction times. Using the Social Stories within my classroom made me want to research more on if I am using the intervention correctly and how I can use it more beneficially to continue to see improvements throughout the school day with communication skills, prosocial skills, and replacing challenging behaviors.

What are Social Stories?

Social stories are an evidence-based practice that is used in various school settings with students with ASD. Carol Gray first developed and introduced Social Stories around 1990 hoping to create a positive intervention strategy to help students with ASD learn social skills. Social Stories describe instructions for what the student does, why the student does it, and how the target individual should behave. Carol Gray defines a Social Story as follows:

A Social Story accurately describes a context, skill, achievement, or concept according to 10 defining criteria. These criteria guide Story research, development, and

implementation to ensure an overall patient and supportive quality, and a format, “voice”, content, and learning experience that is descriptive, meaningful, and physically, socially, and emotionally safe for the child, adolescent, or adult with autism (Gray, 2015).

Examples of skills that Social Stories may teach to students with ASD include responding to cues, joining in conversations, sportsmanship, initiating or maintaining dialogue, skill acquisition, adaptive skills, etc.

In all article reviews for this research paper, Social Stories were written in alignment with Carol Gray’s 10 criteria:

#1- The Goal. A Social Story meaningfully shares social information with a patient and reassuring quality, and at least 50% of all Social Stories applaud achievements.

#2- A Social Story has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information.

#3- A Social Story answers ‘wh’ questions.

#4- A Social Story is written from a first or third-person perspective.

#5- A Social Story uses positive language.

#6- A Social Story always contains descriptive sentences, with an option to include any one or more of the five remaining sentence types (perspective, cooperative, directive, affirmative, and/or control sentences).

#7- A Social Story describes more than directs, following the Social Story formula.

#8- A Social Story has a format that is tailored to the abilities and interests of its audience, and is usually literally accurate. (Considerations include Story length; organization and sentence structure; repetition, rhythm, and rhyme; modifications in vocabulary and literal accuracy including careful selection of verbs and alternative

vocabulary; and possible use of metaphors or analogies if they are understood by the audience.)

#9- A Social Story may contain individually tailored illustrations that enhance the meaning of the text.

#10 A Social Story title meets all applicable Social Story criteria (Gray, 2015).

When a Social Story is written with all 10 criteria, it results in an outcome that is positive and respectful where students are able to learn meaningful skills and behaviors. Each Social Story is geared toward a specific behavior of a student and emphasizes a task that neurotypical people may think of as a simple idea. Social Stories have also been shown to protect the self-esteem of children with autism. They address topics that are typically challenging for autistic children and create a positive and supportive way of teaching and learning. Social Stories can also build self-esteem by using positive praise as the students learn a difficult task or by picking out positive qualities of a child, such as perseverance or resilience.

When looking at Social Story interventions, the question that needs to be answered is: How are Social Story interventions an effective teaching tool to use with students with ASD to help show positive outcomes in communication skills, prosocial behaviors, and challenging behaviors? Each student is unique, and it is important to make sure the interventions are targeted toward the behavior the student needs to improve. This literature review will focus on how Social Story interventions show a positive outcome in communication skills, prosocial behaviors, and challenging behaviors with students with ASD.

Definition of Terms

Many students mentioned in this research paper are students with disabilities, mostly diagnosed with autism spectrum disorder (ASD). These students qualify for special education

services in the educational setting. This research paper focuses on the students receiving special education services under the category of ASD. According to the Centers for Disease Control and Prevention, ASD is a developmental disability that causes significant social, communicational, and behavioral difficulties but the ability of these individuals can vary significantly. Some people with ASD may have very advanced verbal communication skills, while others may be nonverbal. Some may be able to live completely independently, while others may need a lot of support from other individuals to complete daily tasks. People with ASD tend to need more guidance with learning appropriate social skills and behaviors.

Research Question

The guiding research question for this thesis is: How are Social Story interventions an effective teaching tool to use with students with ASD? It is important to look at the different uses of Social Stories being used in the classroom. Social Stories can be used to show positive outcomes in behaviors with students with Autism Spectrum Disorders, such as oral communication skills that help shape these students into being advocates for themselves, prosocial behaviors these students may need guidance with, and challenging behaviors in classrooms these students may come across.

Chapter II: Literature Review

Literature Search Procedures

To find the literature and information for this thesis, searchers of Education Journals, Academic Search Premier, ERIC, Google Scholar, JSTOR, and EBSCO MegaFILE were conducted for studies and publications from 2002-2023. The keywords that were used in these searches included “Social Stories”, “students with ASD”, “challenging behaviors and the use of Social Stories”, “prosocial behaviors and the use of Social Stories”, “communication and the use of Social Stories”, and “ASD Social Story interventions”. This chapter will review the literature on the effectiveness of Social Stories used with ASD students in three sections in the following order: Social Story Interventions and Communication Skills, Social Story Interventions and Prosocial Behaviors, and Social Story Interventions and Challenging Behaviors.

Social Story Interventions and Communication Skills

According to Adams et al. (2004), children with ASD have deficits in understanding and effectively using social skills to interact and communicate with others. These children may lack the ability to maintain eye contact during conversations, misunderstand social cues, or have difficulty understanding appropriate ways to gain attention or ask for help when needed. Adams et al. (2004) conducted a study to look at using Social Stories to improve communication skills among students with ASD. A single case subject design was used to determine the efficiency of using Social Stories to increase socially inappropriate behaviors in a child with ASD. A seven-year-old male was the participant in this study. The study focused on behaviors during homework time in a home environment and used Social Stories to decrease frustration behaviors. Next, the behaviors were examined in a school setting to see if skills learned from the Social Stories generalized from the home to the school setting. The child exhibited frustration, anxiety,

and stress. Instead of communicating his needs to adults when trying to complete a task, the child displayed behaviors such as falling from the chair, hitting, or negative self-talk.

Adams et al. (2004) divided the study into four phases. The first phase consisted of completing observations to determine baseline data. The most frequently occurring target behaviors included crying, falling, hitting, and screaming. The second phase was the intervention phase where the Social Story intervention was implemented with the child each time before starting a homework task. A single Social Story addressed completing homework, the homework situation, all four problem behaviors, and the desired replacement behaviors. Only one story was used that included all four unwanted behaviors combined so the child would not become overwhelmed with multiple different stories. This also helped him remember the script when needed. During the third phase, the Social Story was eliminated from the homework routine to see if the unwanted behaviors increased or decreased and to determine another baseline. During the fourth phase, the Social Story was implemented into the homework routine again.

Adams et al. (2004) looked at the results of all four of the targeted behaviors separately. The study showed a 48% decrease in crying behaviors, a 61% decrease in screaming behaviors, a 74% decrease in falling behaviors, and a 60% decrease in hitting behaviors. In the end, the Social Story in this study provided positive outcomes and decreased the frequency of undesired communication behaviors. According to the qualitative data gathered during this study, the teacher survey reported increased communication skills from the participant when the Social Stories were implemented in the home environment during homework time. The unwanted behaviors decreased in the classroom, especially crying, and the participant found more effective ways to communicate his needs and ask for help when a task became too difficult.

Anthony & Bobzien (2021) conducted a study that showed the effectiveness of Social Stories used in two different ways to improve communication skills in autistic adolescents. He looked at initiating and responding to conversations. Growing into adolescence is a challenging time for many students, especially adolescents with autism. Because of the difficulty communicating and socializing with same-aged peers, adolescents with autism can experience more frustration, isolation, and/or depression. This study included two 13-year-old boys as participants who were diagnosed with autism. Both participants were verbal autistic students, although they used multiple different nonverbal strategies throughout their school day. Participant One showed difficulty maintaining conversations with peers unless it was a topic of interest to him. Participant Two struggled with communication skills including initiating and engaging in conversations. He repeated himself several times after asking a question even after an answer had already been given.

The study by Anthony & Bobzien (2021) began with obtaining baseline levels of participant communication that included initiating and responding to conversations. The participants were placed in a room for 30 minutes where they played a game together with a partner; a camera recorded their interactions. A Social Story was developed with the topic of playing a game with a friend and talking with that friend while playing. Each participant received both a technology-based version and a printed version of the Social Story. The two variables measured included verbal communication and on-topic responses. When the intervention began, each student went into a separate room with an adult and read the Social Story provided. The students then answered a couple of comprehension questions during the first delivery to ensure they understood the Social Story. The results concluded that both participants increased their ability to initiate and engage in conversational topics after the Social Story intervention was

implemented. One participant showed increased communication skills when the paper version of the Social Story was used, but the other participant showed increased communication with the technology-based Social Story. The qualitative data gathered showed the technology-based Social Story was more age-appropriate for the two participants, easier to use, and more preferred than the paper Social Story. Social Stories improved both participants' communication skills. Regarding the need for greater consistency with the outcomes of the Social Story format, a conclusion about whether the paper-based or technology-based Social Story intervention was the most effective could not be proven from this study.

Kwon et al. (2022) completed a study to determine whether exposure to Social Stories increased social interaction and engagement skills in deaf and hard-of-hearing students with ASD. The researchers chose three third-grade students as participants. All participants were deaf and hard of hearing, had been diagnosed with autism, and used American Sign Language (ASL) as their primary method of communication. Four communicative social behaviors targeted for observation in the study included the social initiation of the deaf hard-of-hearing student toward a peer, the social initiation of a peer toward the deaf hard-of-hearing student, the deaf hard-of-hearing student toward a peer, and peer responses toward the deaf hard-of-hearing student. Social engagement in this study was defined as the time the deaf hard-of-hearing student was appropriately engaged in activities with peers. The Social Story intervention consisted of the teacher reading a social story to the deaf hard-of-hearing students, and their class, which included five target vocabulary words presented in ASL chosen to increase social engagement with peers. The topics discussed in the Social Stories included greetings, expressing feelings, sharing, turn-taking, and working together. The participants and classmates heard the Social

Stories immediately preceding lunchtime. Data was gathered in the lunchroom as students communicated spontaneously.

The results of Kwon et al. (2022) were different than other studies using Social Stories to increase the communication skills of ASD students. One out of three participants demonstrated improvement in social communication skills following the implementation of the Social Story intervention. One limitation of this study that may have led to different results compared to other studies was that the Social Stories did not include specific targeted skills for each student. The Social Stories strictly taught ASL vocabulary to facilitate peer communication. The Social Stories were also read to the whole class and not read independently by the three participants. Although this study did not show a clear relationship between communication skills with deaf hard-of-hearing ASD students and their peers, it illustrated that Social Stories may have a stronger impact given additional support and more individualized practice resulting in significant improvement in communication skills.

In a study conducted by Reichow & Sabornie (2009), an 11-year-old male with high-functioning ASD participated in a study to increase acceptable verbal greeting initiations. The participant had good use of verbal communication skills, but he often found it easier, and spent more time, interacting with adults rather than his peers. Social skill lessons were given to the participant and his whole fourth-grade classroom each morning, but the lessons resulted in no changes in the behavior of the participant. After seeing no results from the social skill lessons, a Social Story intervention was created and implemented to help the participant increase his social interactions with peers. The Social Story was read to the participant each morning before he entered his classroom. The Social Story covered verbal greetings such as when to greet someone, why people use greetings, acceptable words to use when greeting someone, how to initiate

greetings, and what expected outcomes of a greeting might be. Visual cue cards were also used with the participant to prompt him to greet his teacher and peers. Data was collected in the first five minutes of the participant entering the classroom and was based on any verbal greeting the participant initiated toward an adult or peer. Some examples were hi, hello, good morning, how are you, what's up.

The results of the study by Reichow & Sabornie (2009) showed an increase in acceptable verbal greeting initiations after the Social Story intervention was implemented. The behavior was maintained throughout the day, not just in the morning, by using the visual cue card that was made to prompt the participant to continue to greet others when entering a room. When the Social Story was withdrawn, there was an absence of verbal greetings from the participant. However, when the Social Story was reimplemented, the participant returned to greeting peers when entering a classroom. The absence of the targeted behavior and verbal greetings should not decrease when the Social Story is taken away from the student if it was learned by the participant. Data proved when the Social Story was implemented, the participant performed the replacement behavior. One question this limitation raised was how long before the behavior from the Social Story is completely generalized and the Social Story implementation and visual cue card can be eliminated from the daily routine of the participant.

Delano & Snell (2006) completed a study with three ASD children who were learning to improve their communication and social skills along with six nondisabled peers used for generalization probes. All three targeted participants with autism had difficulty with verbal initiation toward peers, involvement in social interaction with peers, and responding to initiations from peers. The Social Stories used in this study were specifically written for each student and targeted toward a specific play session where data was collected. The four targeted social skills

included: securing attention, initiating a comment, initiating a request, and making a contingent response. First, the Social Story was read to each participant. Then, the participants were asked comprehension questions and instructed to participate in 10 minutes of play with another student.

The results of this study showed that Social Stories effectively increased social communication skills in early elementary-aged children. The results proved when the Social Story was actively implemented with the students, their communication skills increased frequently. As the presentation of the Social Story faded, and was eventually taken away, the participant's communication skills tended to decrease again but were still better than the baseline data. The study showed a strong correlation between when the Social Story was read to the students and the increase in communication skills in the time shortly after it was read to them. One limitation of this study included the number of days the intervention was implemented. The Social Stories were only implemented for 15 days before they were removed from the participants' daily routines. From the time Social Stories were implemented to the time researchers faded, Social Stories may not have been enough time for the participants to fully learn the replacement communication and social skills taught in the Social Story (Delano & Snell, 2006).

Hanley-Hochdorfer et al. (2010) performed a similar study wondering if Social Stories increased verbal initiation skills in children with Asperger's disorder. Hanley-Hochdorfer et al. (2010) noted the lack of sufficient communication skills in children with ASD and the importance of finding an intervention that helped the students learn appropriate skills to be successful when communicating with adults and peers. The study consisted of three elementary-aged students along with one middle school student, all diagnosed with Asperger's

disorder who struggled with social interactions. Through observation during lunchtime at school, researchers selected the targeted behavior as initiating verbalization with peers.

The researchers created a Social Story with the target behavior. The story explained how to enter group conversations and the importance of asking questions while conversing with others. The Social Story intervention was implemented four times per week for six weeks and no more than 15 minutes before lunchtime. All participants showed an increased verbal initiation when the Social Story intervention was implemented. Although the results of this study were positive, they provided limited support that Social Stories greatly increased communication skills in students with ASD in a natural school setting rather than a controlled setting. One limitation of this study had been the lack of stimulus features that matched the lunchroom environment. A conclusion that Hanley-Hochdorfer et al. (2010) drew from this limitation was that Social Stories may only be effective if they include stimulus features that are similar to those in the targeted environment (Hanley-Hochdorfer et al., 2010).

Kagohara et al. (2013) completed a similar study investigating the effects of Social Stories and video modeling used to teach two students diagnosed with Asperger syndrome to greet school staff. The study involved two elementary-aged students who did not greet or acknowledge other adults or peers in the school. According to the teacher, the two participants needed to work on greeting adults within the school building to strengthen their communication and socialization skills. Social Stories and video modeling occurred two to three times a week on an iPad or computer during breaks in the classroom, or a separate room if lessons were occurring. The Social Story was posted on a series of slides with words and pictures describing how to greet people at school. The video modeling consisted of a cartoon where two characters greeted each other at school.

Data collected by Kagohara et al. (2013) involved waiting five seconds in the morning for the participant to spontaneously greet the teacher or other adults in the room as they arrived. If five seconds went by without a greeting, the teacher initiated a greeting and waited for a reply. During baseline, Participant One initiated one greeting and Participant Two initiated zero greetings. Although Participant Two did not have consistent results, following the Social Story and video modeling intervention, both participants increased spontaneously in greeting adults as they walked into the classroom. There were two limitations in this study to take into account. First, there was no time to complete the Social Story and video modeling intervention in the morning immediately before the data was gathered. Second, the researcher was not able to control what time the participants arrived at school. Some days the participants did not have time to see their teacher to greet them before the day began. In conclusion, this study showed a strong correlation between the increase in communication skills in elementary-aged students with ASD and the use of Social Stories and video modeling combined.

Positive play skills in young children can help with growth in communication and social interactions as they grow older. Murdock et al. (2013) used an iPad to create a Social Story to increase pretend play skills with four ASD preschoolers. Participant One repeated himself during unstructured play due to his difficulty with communicating. Participant Two exhibited repetitive play and often repeatedly smelled toys or rolled a truck down the ramp. Participant Three whispered when interacting with peers and preferred to play by himself. Lastly, Participant Four typically played rough with toys by throwing them or banging them on a surface. The Social Story was presented on the screen on an iPad that consisted of pictures with a storyline and audio recording of character dialogue. After listening to the Social Story, the participants took part in a two-minute play session where data was collected.

Results revealed three out of four participants with low performance during baseline and immediate response to the intervention. Participant Three did not show increased behavior due to his non-compliance during the intervention phase. Participants used verbalizations learned from the Social Story and verbalizations on their own as they became more comfortable. The study proved that Social Stories help preschoolers with ASD become more engaged in verbalization during play (Murdock et al., 2013).

Social Story Interventions and Prosocial Behaviors

Appropriate social skills are essential for communication and creating friendships. By definition, people with ASD are challenged with social communication and overall social skills. Due to certain characteristics in ASD students, prosocial behaviors may be hard for ASD students to engage in prosocial behaviors. Almutlaq (2018) completed a study using a Social Story intervention to increase the number of compliments ASD students gave to others. This study used Social Stories to help students understand how and why it is a nice thing to give compliments to others. Three elementary-aged ASD participants in this study had IEP goals to improve their social skills. The study included a total of 32 sessions including baseline, intervention, and generalization conditions. Data was collected during recess time.

The Social Story was created on an iPad and presented how to give compliments to peers and adults using words and pictures. Participant data was collected based on the participants performing the three steps identified in the Social Story: smile, give a compliment, and respond “You are welcome.” During baseline, Participant One completed zero of the steps. After the Social Story was implemented, Participant One completed two to three of the steps. Participant Two progressed from completing zero to one of the steps at baseline to completing two to three steps three days after the Social Story was introduced. Lastly, Participant Three completed zero

to one step at baseline and maintained giving compliments using two to three of the steps after the Social Story was implemented. This study positively resulted in students successfully giving others compliments after the Social Story was implemented. This study also supported the idea that Social Stories helped students with ASD engage socially during the unstructured times of the days when more social interaction skills were used (Almutlaq, 2018).

Visual learning is a typical strength for students diagnosed with ASD. With this knowledge, Wright & McCathren (2012) completed a study investigating how the visuals included in Social Stories may be a beneficial way to help explain difficult situations for students with ASD. The authors researched how Social Stories increased prosocial behavior and reduced challenging behaviors in young children with ASD. Participants in this study were all males and aged from four to five years. The participants displayed undesired behaviors such as not responding to peer initiation or responding with negative verbal or nonverbal physical behavior. Intervention sessions took place during free play inside the preschool classroom. The Social Stories included phrases and many visuals that targeted the specific undesired behaviors and replaced them with positive replacement behaviors for the students to learn. The Social Story was read to the participants by the teacher immediately before free play, but it also was sent home for parents to read with the children and was available for the children to access in the classroom at any time.

According to Wright & McCathren (2012), the study would have resulted in more robust results if the Social Story intervention had been paired with another intervention such as video modeling. Although the results were not very strong, they did show that Social Stories slightly increased prosocial behavior and decreased negative social interactions in young children with ASD. Three out of four participants showed an increase in prosocial behaviors while all four of

the participants showed some decrease in negative social interactions after the Social Story intervention was implemented.

Crozier & Tincani (2007) conducted a study focused solely on the effects of Social Stories for prosocial behaviors in preschool children with autism spectrum disorders. The purpose of this study was to provide an example of the impact Social Story interventions had on children in inclusive preschool settings. A total of three participants were included in this study; one four-year-old and two five-year-olds. One trial considered students four years old, and the other two looked at students five years old. All three students were diagnosed with an autism spectrum disorder. Interventions were provided in the classroom environment. Teacher interviews were conducted at the beginning of the study to determine targeted behaviors during challenging times of the day. Observations ensured that the targeted behaviors were clearly defined with replacement behaviors provided. Targeted behaviors were chosen by analyzing behaviors that interfered with student learning or socialization and behaviors that were not already targeted with replacement behaviors as part of a different intervention. The targeted behaviors gathered were different for each participant. Participant One had a target behavior of roaming around the room during circle time. The replacement behavior included in his Social Story was for him to sit appropriately during the first 10 minutes of morning circle time. Participant Two had difficulty talking with his peers during snack time. The replacement behavior included in his Social Story was how to verbally engage in appropriate conversations with peers during snack time. Finally, Participant Three struggled with inappropriate play with peers such as hitting, kicking, grabbing items from others, biting, yelling, and pushing. The replacement behavior for Participant Three included replacing inappropriate play with appropriate interactions that included asking to use materials, using materials cooperatively, and

making appropriate comments to others while playing. When Crozier & Tincani (2007) began the Social Story intervention with the participants, the students met at a table where the Social Story was immediately read to them before entering the setting where the target behaviors previously occurred.

After reviewing the data collected from the studies, Crozier & Tincani (2007) found positive effects of using Social Stories with children with ASD. Participant One increased 64% from his initial baseline to the final baseline in his ability to sit appropriately for the first 10 minutes of morning circle time. From the initial to final baseline, Participant Two increased the ability to verbally interact with peers during snack time by 5.8 interactions per session. Verbal prompts were given to Participant Two in addition to providing the Social Story. The results showed that the Social Story may not have been the sole reason for the increased prosocial behavior. Participant Three increased his ability to appropriately play with peers by an average of 15.86% and decreased his inappropriate behaviors by an average of 3.91%. This study showed a relationship between Social Stories and prosocial behaviors, but the authors stated that continued implementation of Social Stories must occur for the prosocial behaviors to continue.

In 2015, Golzari et al. conducted a larger study that sought to determine the effectiveness of Social Stories used with ASD students to improve prosocial skills of understanding and perspective talking and initiating and maintaining interactions with others. The study included 30 six to 12-year-old male participants all diagnosed with ASD. The 30 participants were split up into two groups: the experimental group and the control group. A social skills test was given to all participants before the intervention was implemented. For the baseline data, a questionnaire was given to the parents of each participant. In addition, levels of behavior, understanding of language, and reading were assessed by the researchers and teachers in the classroom and

playroom. After the baseline social skills test was scored, the Social Story intervention was written based on the frequency of the unwanted behavior, the place where the behavior occurred, and how the behavior occurred. After the Social Story was written, it was implemented with the experimental group.

After eight weeks of intervention, the social skills questionnaire was completed again by parents as a post-test, and the data was analyzed to determine the change in the targeted behaviors of the participants. The results showed that when the experimental and control group data were compared, the Social Story intervention drastically improved the prosocial behaviors of young males with autism. The study suggested that sometimes children with ASD may find certain social situations more difficult and confusing than neurotypical children. Social Stories helped explain and instruct the children on how to behave in different real-life social situations (Golzari et al., 2015).

Balakrishnan & Alias (2017) also investigated how Social Stories could encourage social interaction and prosocial behavior among young children with ASD. The study was completed over a five-week period where round one consisted of gathering baseline data without implementing the Social Story and the second round consisted of the intervention stage where the Social Story was shared with each participant. Participant One was a five-year-old male diagnosed with ASD whose Social Story focused on appropriately initiating and responding to peer conversations. Participant Two was a seven-year-old male with ASD and features of ADHD whose Social Story was about building friendships and maintaining appropriate conversational turns with others. Participant Three was a seven-year-old female diagnosed with Pragmatic Communication Disorder and although showed signs of ASD, did not have an official diagnosis. Her Social Story targeted playing with her friends and using appropriate language when talking

with peers. Participant Four was an eight-year-old male with ASD whose Social Story focused on communication with friends and ways to join in play with peers.

The Balakrishnan & Alias (2017) findings showed that Social Stories positively impacted social interaction and prosocial behaviors for children with ASD. Participant One did not demonstrate any positive social interactions with peers at baseline. Following the implementation of the Social Story intervention, he positively and appropriately initiated and responded to peer conversations two times a week. Participant Two showed the most growth improving from positive peer interactions and maintaining appropriate conversations once at baseline to five times after he listened to the Social Story. Participant Three played with her friends and exhibited appropriate words minimally during baseline. She interacted with peers three times a week after the Social Story intervention was implemented. Lastly, Participant Four showed positive peer interactions once during baseline with major improvement noted when the Social Story was implemented. He joined his friends during playtime while communicating appropriately three times a week. According to Balakrishnan & Alias (2017), the Social Story must be read consistently each day to be successful, and it must be revisited frequently to ensure that the replacement behaviors continue.

According to O'Handley et al. (2015), insufficient levels of eye contact can restrict the development of other social skills in people with ASD. A handful of people with ASD have difficulty using sufficient levels of eye contact when interacting with others, but when eye contact increased, prosocial behaviors also increased. Similar to the study reviewed above, O'Handley et al. (2015) conducted a study to investigate how the combination of Social Stories and video modeling could improve eye contact in high school students with ASD. The study used six high school-aged students as participants who were diagnosed with ASD and had

difficulty making and maintaining eye contact during conversations with others. The Social Story used in this study explained the importance of eye contact and included a video model that demonstrated appropriate eye contact between two individuals conversing.

Implementation of the Social Story and video modeling intervention occurred in a room containing the participant and the researcher. The researcher documented the total duration of eye contact the participant demonstrated during a three-minute conversation probe. The participant read the Social Story and watched the video immediately before the conversation probe occurred and data was collected. Participants were also told they could receive a prize if they engaged in conversation with the researcher during observation. The results of this study showed only a moderate increase in eye contact made by students when the Social Story alone was used. The study showed more effective and immediate results in increased eye contact when Social Stories and video modeling were used together (O'Handley et al., 2015).

Most studies involving the use of Social Stories are tailored toward school-aged children, but Samuels & Stansfield (2012) conducted a study that looked at the use of Social Stories to help adults with ASD increase socially appropriate behaviors and prosocial skills. The study included three adult males diagnosed with ASD, along with one participant who was diagnosed with Prader-Willi Syndrome but showed characteristics of ASD. The participants were part of an organization that specialized in helping young adults with ASD who displayed challenging behaviors. Each participant received two Social Stories based on their personal targeted behavioral goals. Behaviors targeted in the Social Stories were socially problematic behaviors exhibited daily by the participants. The behaviors included initiating greetings, making references to poisoning food and drinks, going near children and often touching them, using

offensive language, placing hands in underwear, videotaping when unauthorized, and using bossy talk.

During the intervention period, the Social Story was read to the participant by a staff member before an activity where the data was collected. Although not all Social Stories could be read immediately before an event, all were read within a fair amount of time. After two weeks of intervention, use of the Social Stories faded. After two more weeks, the final data was collected in the follow-up stage. The results of this study showed that when the Social Story intervention was implemented, adults with ASD demonstrated positive changes related to challenging behaviors. The socially problematic behaviors of the adults were reduced, but according to Samuels & Stansfield (2012), the behaviors may take more time to generalize completely without the use of Social Stories because the behaviors were embedded into the adult's repertoire or possibly due to the unpredictability in the adult care setting (Samuels & Stansfield, 2012).

Karayazi et al. (2014) performed a study that looked at the prosocial behaviors of a young adult with autism and the use of Social Stories to increase specific prosocial behaviors. The participant in this study was a 22-year-old female diagnosed with mild autism. The participant was finishing her high school curriculum online while also participating in college campus activities. The participant's target behaviors identified by the mother and special education teacher chosen to help increase her social skills included greeting others when approached and wiping her nose when needed. Both prosocial behaviors were taught to the participant through a Social Story. After baseline data was collected, the Social Story intervention was implemented. Over a total of nine sessions, the teacher read the Social Story aloud to the participant three times, and the participant was asked how to perform each targeted behavior addressed in the Social Story.

When the Social Story was implemented, the percentage of appropriate greeting behavior and proper nose wiping increased. After nine sessions, the appropriate greeting behaviors increased from an average of 43% at baseline to an average of 80%. Appropriate nose-wiping behavior increased from an average of 6.25% during baseline to an average of 100% during the Social Story intervention. The Social Story intervention in this study resulted in a significant increase in the prosocial behaviors of a young woman with ASD who was provided with no other support (Karayazi et al., 2014).

Social Story Interventions and Challenging Behaviors

Students with ASD tend to have difficulty regulating their behaviors in the classroom due to the identified ASD characteristics that include communicative challenges, social skills deficits, and restrictive and repetitive behaviors, including sensory issues. Dysregulation may cause challenging and disruptive behaviors within the classroom that can interfere with and disrupt the learning of both the student and their peers. Social Story interventions may be one way to decrease or even eliminate disruptive and challenging behaviors seen in ASD students. Bordoff-Gerken & Asaro- Saddler (2021) examined the behavior of four male ASD students aged seven to nine years old who struggled with inappropriate classroom behaviors that interfered with their learning. Initial baseline data was collected on the number of times the teacher redirected each student during group instruction times. A redirect was tallied when the teacher verbally or nonverbally reminded the students to re-engage in the lesson when the student was off task. After baseline data was gathered, a Social Story was created and presented on an iPad. Each student listened and watched their story immediately before instruction. Data was collected for the number of redirects during instruction time immediately after the Social Story was created and read by the students.

Baseline data indicated that all four of the students displayed significant challenging behaviors within the classroom including the inability to remain on task during a lesson. Each student required multiple redirects from their teacher at baseline. When the Social Story intervention was implemented, the number of redirects from the teacher immediately decreased for each participant. Participant One decreased from 10 redirects to three. Participant Two dropped from 14 to one redirect. Participant Three moved from 10 redirects to four. Lastly, Participant Four decreased redirects from 13 to zero. The results of this study showed that Social Stories presented to students with ASD on an iPad helped reduce off-task behaviors and the number of redirects needed for the students to attend a classroom lesson (Bordoff-Gerken & Asaro- Saddler, 2021).

A similar study by Beh-Pajooch et al. (2011) examined how Social Stories reduced challenging behavior in children with ASD. The challenging behavior of the three young elementary-aged participants affected their learning, and teachers worried the behaviors would put the participants at high risk as they grew older and affect their academic achievement. Target behaviors identified for Participant One included crying, yelling, and screaming that he wanted to go home. Target behaviors for Participant Two included wandering around the classroom. Lastly, the target behavior for Participant Three included laying down on the desk with his feet on the chair.

Social Stories were created for each student with their own personalized target behaviors and replacement behaviors. After the implementation of the Social Stories, Participant One and Participant Two showed a decrease in challenging behaviors. Data for Participant Three was inconclusive due to the reduction of target behaviors during baseline data before the Social Story was implemented; this resulted in showing no effects after the implementation of the

intervention. The study was consistent with results from other studies that concluded Social Stories have a positive impact on improving challenging behaviors of students.

While some ASD students may have difficulty regulating behaviors, other students with ASD may demonstrate repetitive behaviors that can be distracting toward themselves, teachers, and peers in the classroom. In 2007, Reynhout & Carter examined the correlation between a Social Story intervention and the elimination of tapping behavior from a student with ASD who disrupted learning inside the classroom. The participant for this study was an eight-year-old male who attended a university-based program for students with disabilities and was placed in a classroom for students with mild to moderate disabilities. The participant consistently tapped on surfaces in the classroom. The tapping was a big distraction for his peers and teachers. Researchers hoped to use the Social Story to decrease the participant's hand tapping during reading instruction. The first time the intervention was implemented, the Social Story was read aloud to the participant right before reading instruction including comprehension questions to ensure the participant understood the story. After the first day, the student continued to independently read the Social Story daily before reading instruction.

Reynhout & Carter (2021) found decreased tapping behaviors from the student following the Social Story. One limitation of this study was due to other behavioral supports used alongside the Social Story that could have led to the documented changes in behavior. Positive reinforcement occurred whenever the student replaced the tapping behavior with another behavior. Verbal prompts were also provided by the teacher during reading time to help the student remember to use his replacement behaviors. Because additional changes were given in addition to the Social Story, this study could not prove that it was only the Social Story that resulted in decreased tapping from the student. The results indicated that the Social Story may

have been a partial reason for the decreased unwanted behavior. For the study to emphatically indicate a strong correlation between a decrease or elimination of the tapping behavior and the use of Social Stories, the Social Story should be the only consistent intervention strategy provided.

Graetz et al. (2009) examined the effects of a Social Story intervention and a decrease in inappropriate behaviors for adolescents with ASD. The study included three participants. Participant One was a 12-year-old ASD male student who had difficulty participating in Physical Education class. He dropped to the floor whenever he was asked to participate in activities. Participant Two was a 13-year-old ASD male who used a high-pitched voice in the classroom when conversing with others. Participant Three was a 12-year-old ASD female who frequently sucked on her fingers or other objects while in the classroom. All targeted behaviors were clearly identified for each participant before a Social Story was created. Each Social Story was designed to replace the targeted behavior with a more appropriate replacement behavior. For example, Graetz et al. (2009) explained the Social Story of Participant One as follows:

Page 1: Ronnie Learns to Stand and Play (with photo of Ronnie standing). Page 2: My name is Ronnie and I go to Lawrence Middle School (with photo of the school). Page 3: Almost every day we have P.E. (with photo of Ronnie and classmates at P.E. Ronnie is standing next to his peers). Page 4: Everyone stands up. Everyone plays (with photo of Ronnie and classmates playing in P.E.). Page 5: I will stand up. I will play (with photo of Ronnie standing and playing in P.E.). Page 6: It makes my teachers and friends happy when I stand up and play (photo of teachers, Ronnie, and classmates). (p. 95-96)

Social Stories for the two other participants followed the same outline as above stating how targeted behaviors could be replaced by a more appropriate target behavior. The Social Stories

were created and read with the students at an appropriate time before the class where targeted behaviors were observed. During the reading of the Social Stories, researchers asked questions about the story to ensure comprehension and participants heard positive comments about the replacement behavior seen in the story (Graetz et al., 2009).

The results from Graetz et al. (2009) study indicated an immediate decrease in all three inappropriate participant behaviors following the Social Story implementation. Not only did the results of this study show decreased inappropriate behaviors in the setting targeted for the students, but hearing the Social Stories also resulted in generalization and maintenance of behaviors in other settings during the school day. The use of personalized photos of the students performing appropriate targeted behaviors in the Social Story positively correlated with student outcomes. According to Graetz et al. (2009), student outcomes could have been because the personalized photos were concrete and meaningful and helped the students understand the expected appropriate behaviors.

Scattone et al. (2006) examined the use of Social Stories as an effective behavioral intervention to help children with autism who had difficulty with appropriate social interactions. The study consisted of three male participants between the ages of eight and 13, all who were diagnosed with autism. The participants had difficulty with aggression, screaming, and grabbing toys. Participant One was in a self-contained special education classroom and had difficulty interacting with peers during unstructured free time. He played by himself in the corner where he screamed and threw toys. When Participant One sat with peers, he would not interact with them. Participant Two was a 13-year-old male with autism who spent the majority of his day in his general education classroom with nondisabled peers. He sometimes interacted socially with peers, but this mainly involved inappropriate comments or gestures such as rubbing his stomach

or shaking his bottom. Participant Three was an eight-year-old male student with autism who also spent the majority of his day in his general education classroom. He had difficulties with fine motor skills and was kept separate from his peers during activities. When collaborating with his peers, he mostly engaged in conversations involving his favorite Disney movie.

Scattone et al. (2006) collected data for the study immediately after the Social Story was read to the participants before free time in the classrooms. A Social Story was developed for the students that revolved around free time and included appropriate social interactions and responses with peers. The results of the Social Story Intervention were different for each participant. Participant One showed no change in his appropriate social interactions after the Social Story was implemented. This could have been due to his refusal and noncompliant behavior to participate in listening to the Social Story during the majority of the intervention. Participant Two showed the most significant increase moving from 17% to 57% with appropriate social interactions. Participant Three also increased from 10% to 37% with appropriate social interactions with peers. One change that Scattone et al. (2006) stated could be beneficial for the future use of Social Stories in the classroom would be to have the students be a part of writing the Social Story so it would be more personalized and familiar to the student.

Lorimer et al. (2002) examined the effects of Social Stories that were used to decrease the problem behaviors of a five-year-old male diagnosed with mild to moderate ASD. The participant attended an early childhood special education program four days a week. He was also provided occupational, speech/language, and behavioral therapy interventions in his home setting. At home, the participant exhibited significant challenging behaviors including tantrums. The tantrums consisted of screaming, hitting, kicking, and throwing objects. The participant

typically displayed these tantrums when his parents talked with other adults or during therapy sessions when he wanted to do something else at that exact moment.

Two Social Stories were written for the participant in this study. The first Social Story targeted his need for attention from others when they were talking. The second Social Story was written to make waiting for the participant easier. The participant's parents read both Social Stories each morning, at the beginning of each therapy session, and at a time when adults had conversations in the presence of the participant. Data was collected by observing the frequency of tantrums the participant had when his parents talked with other adults or during the participant's therapy sessions when he wanted to be doing something else at that exact moment (Lorimer et al., 2002).

Baseline data showed that tantrums occurred five out of seven days a week. When the Social Stories were implemented, there was a significant decrease in tantrums from the participant. The participant only averaged one tantrum within seven days. The second baseline data collection revealed that the participant did not have a tantrum the first day the Social Story was eliminated from his routine, but the following two days the tantrum behavior resurfaced. Based on the results of this study, Social Stories positively decreased challenging behaviors for a young student with mild to moderate ASD when the Social Stories were consistently implemented in the participant's daily routine (Lorimer et al., 2002).

Cihak et al. (2012) completed a study with male middle school students to analyze if video Social Story interventions decreased specific attention-seeking and task avoidance behaviors. All participants were diagnosed with Asperger's or ASD and received special education services during the school day. Specific attention-seeking and task-avoidance behaviors carried out by the participants included laughing or shouting for no reason, fixating on

certain things, asking the same question repeatedly, having difficulty interpreting social cues, staying on task, pacing around the classroom, repeatedly sharpening pencils, echolalia, hand flapping, screaming, or throwing books or papers when asked to complete a task. Students videotaped two different readings of the Social Stories and role-played replacement behaviors. One Social Story was for attention-seeking behavior and the other was for task avoidance. The video also included reinforcement for performing the replacement behavior.

Results from the Cihak et al. (2012) study revealed that when a video Social Story corresponded with a student's off-task behavior, the off-task behavior decreased and the on-task behavior increased. The Social Story video created a way for students to view more appropriate ways to seek attention and receive help when needed. Cihak et al. (2012) stated that it is important to make sure the Social Story matches the specific behaviors and functions for each participant. When the participants in this study viewed the Social Story video that did not match the function of their behavior, there was no improvement in the challenging behaviors in the classroom. Teachers included in this study reported positive changes in participant behavior after the implementation of the Social Story intervention.

More recently, Kurt & Kutlu (2019) conducted a study that looked at the effectiveness of Social Stories used to teach abduction prevention skills to children with ASD. Because of known ASD characteristics, some children with ASD have a hard time deciphering strangers from known adults. The study consisted of three male ASD participants aged four to 12 years old. Thirty-nine adult volunteers participated in the study to act as strangers to help gather data. Sessions were conducted on the streets and roads near the school or homes of the participants. The Social Story was created with eight sentences and pictures on a tablet and was read to the student with the researcher daily before the event where data was collected. The baseline and

intervention data was collected when the participant went somewhere with their parent. The parent walked away to do something and a stranger volunteer appeared to attempt to abduct the participant.

The data collected for this study included the participant responding accurately within three seconds; rejecting the offer, moving away, and telling the adult about the situation. When the participant told the adult about the situation, the adult replied with positive reinforcement. The results of this study explained the positive effects the Social Story had for abduction prevention skills in children with ASD. All four participants maintained the replacement skills after four weeks of the implementation. The participants also generalized the skills they learned in environments other than the training places (Kurt & Kutlu, 2019).

Okada et al. (2010) conducted a study investigating the different ways Social Stories were written and how it impacted the improvement of manners in students with ASD. Three different types of perspective sentences could be included in a Social Story. The sentences could be aimed toward an unknown person, a familiar person, or by the most preferred person. The study looked at what perspective sentences showed the most improvement in head and elbow position during morning circle time and lunchtime. The participant was a 14-year-old male student with ASD whose target behavior in his Social Story was sitting posture. There were four different Social Stories written for the participant. Each Social Story consisted of different perspective sentences. The participant started with intervention one, which consisted of the participant reading a Social Story with no perspective sentences. After data was collected, intervention two was implemented which added a different perspective sentence into the Social Story each time. Results from the study showed the use of Social Stories improved the posture of

the participant, but when the perspective sentences were changed from an unknown person to a familiar person, there was no change in the data.

Mostafa & Mohammed (2012) examined the positive effects Social Stories had on eating behavior in girls with ASD. The female participant in this study exhibited behaviors such as food refusal, sensory-based eating problems, and placing too much food in her mouth at once resulting in gagging behavior. The specific desired behavior researchers and parents chose for the participant included finishing one mouthful of food before grabbing another bite. This would result in a safe and socially acceptable way to eat. The intervention lasted 14 days and the Social Story was read to the student immediately before lunchtime and before meal times at home with her parents. The results of this study revealed that a Social Story was a positive way to teach self-management skills for eating properly and safely to a child with ASD. There was a quick increase in unexpected behavior immediately after the implementation of the Social Story occurred.

Benish & Bramlett (2011) investigated the use of Social Stories with three ASD preschoolers to decrease aggression and increase positive peer relationships. All three participants fell in the at-risk or clinically significant range for aggression on the Behavior Assessment System for Children-2. Baseline data was collected for targeted behavior during a time in the classroom when the student tended to struggle the most with aggressive behavior. Two Social Stories were made for each participant that reflected the targeted behaviors, interests, and abilities of the students. Positive language was used to target aggressive behavior and negative interactions with peers and to provide a replacement behavior for the participant to respond to the situation.

Participant One showed an average of 10 acts of aggressive behaviors and had an average of 23% of positive peer interactions during baseline, and a mean of only one act of aggressive behavior, and an average of 53% of positive peer interaction after the Social Story intervention was implemented. Participant One maintained positive behaviors during the follow-up sessions. Participant Two improved from a mean of seven acts of aggressive behaviors and an average of 24% of positive peer interactions at baseline to a mean of 4.6 acts of aggressive behaviors and an average of 48% of positive peer interactions during follow-up sessions after the Social Story implementation. Lastly, Participant Three improved from an average mean of 19 acts of aggressive behaviors and an average of 12% of positive peer interactions at baseline to an average mean of 5.6 acts of aggressive behavior and an average of 41% of positive peer interaction. The results of this study provided evidence that Social Stories greatly impacted decreasing aggressive behaviors and increased positive peer interactions for preschool students with ASD (Benish & Bramlett, 2011).

Khantreejitranon (2018) investigated whether Social Stories could be used to eliminate inappropriate behaviors in preschool students with ASD. The participants presented more severe symptoms of autism but demonstrated good communication skills. All five participants displayed different inappropriate targeted behaviors during the school day. These included eating with fingers, moving around during lunch time, hitting and biting friends, not sharing toys, jumping on people when greeting them, and licking fingers. Targeted positive behaviors were incorporated into a Social Story used as an intervention to replace the inappropriate behaviors with more appropriate ones. The results of this study showed a decrease in the percentage of inappropriate behaviors after the Social Story intervention was implemented with all five

participants. According to Khantreejitranon (2018), for the Social Story to be successful, it must have specific individualized characteristics for each student and their specific targeted behavior.

Children with autism tend to have a strength in using and responding to visual information. Schneider & Goldstein (2010) completed a study using Social Stories as a visual support system to look at the effects they have when used with ASD students to increase on-task behavior in the classroom. Three kindergarten to fifth-grade ASD students who struggled with off-task behavior or impaired verbal/social communication participated in this study. Targeted behaviors were gathered for each of the participants to be used in the Social Story. The target behavior for Participant One included showing on-task behavior during transition time which was defined as getting his jacket and bag, moving away from his computer, getting in line at the door, and staying quiet in line. Target behavior for Participant Two and Participant Three included appropriately behaving during circle time and reading instruction. Appropriate on-task behavior was defined as only talking when asked by the teacher, raising a hand and waiting to be called on, sitting in their appropriate spot while looking at the teacher or speaker, and following directions. After baseline data was collected, the Social Story Intervention was implemented. Social Stories were first read to the students before circle time or reading instruction time where data was collected.

At the end of this study, the results showed that on-task behavior increased after the implementation of Social Stories. At first, researchers did not observe improvement in on-task behavior from Participant One. Because of this, a Social Story with an increased number of visuals was added to his routine replacing reading the Social Story aloud each day. During a transition, Participant One completed the first step following the visual direction, then moved the visual symbol on his clipboard when he completed it. When more visuals were included in his

Social Story, Participant One decreased the time it took him to move away from his computer from 90 seconds to 70 seconds. Participant Two improved from speaking out of turn an average of 1.8 times during a five-minute observation period to an average of once. Participant Three decreased the frequency of his off-task behavior in the classroom from 36% to 7%. The study completed by Schneider & Goldstein (2010) showed that Social Stories may be used in different ways based on student learning style. For example, Participant One did not demonstrate improvement from the Social Story intervention until additional visuals were added. Social Stories are beneficial interventions to try in the classroom, but they may look different for each student (Schneider & Goldstein, 2010).

Vandermeer et al. (2015) conducted a similar study on the use of Social Stories to increase on-task behavior in the classroom with three students with ASD. The participants displayed behaviors such as gazing into space during lessons and work time, swinging and placing feet on top of the table, crying, screaming, throwing objects, and falling onto the floor. The target behavior was typical on-task behavior defined as seated and attention to task, materials, or teacher. The Social Story was personally written on an iPad for each of the participants with pictures of themselves in the classroom with an audio clip description of the situation. The participants listened to the Social Story prior to tabletop activities with the teacher where data was collected. The results of the study proved that the combination of Social Stories, while being displayed on iPads, increased the on-task behavior of students in the classroom. One limitation mentioned by Vandermeer et al. (2015) included the lack of information gathered on each of the participant's learning styles and emotional states within the classroom. Since the behavioral state and learning styles can greatly impact ASD students' ability to learn, this would be important information to consider in future research.

CHAPTER III: DISCUSSION AND SUMMARY

Summary of Literature

Using Social Stories is an effective classroom intervention to help students improve communication skills, prosocial behaviors, and challenging behaviors. Adams et al. (2004) found that Social Stories decrease the frequency of undesired communication skills in students. The study results showed that students were able to learn more beneficial ways to communicate their needs within the classroom through a targeted and personalized Social Story. Anthony & Bobzien (2021) conducted a study to see whether technology-based Social Stories or paper-based Social Stories resulted in more significant positive communication skills. The results indicated that both types of Social Stories improved communication skills. Kwon et al. (2022) found different results when they used Social Stories with deaf hard of hearing students. Social Stories did not positively impact the way deaf hard of hearing students interacted with their peers. Initiating verbal greetings between students tends to be difficult for students with ASD. Reichow & Sabornie (2009), Hanley-Hochdorfer et al. (2010), and Delano & Snell (2006) found that the use of Social Story interventions for students with ASD increased their ability to initiate verbal greetings toward peers and adults. Kagohara et al. (2013) combined Social Stories with video modeling and found a strong correlation between increased communication skills and the use of video modeling and Social Stories combined. Murdock et al. (2013) found that Social Stories resulted in increased verbal engagement during playtime with preschoolers.

Students with ASD tend to need more support to help them understand and carry out prosocial skills. Almutlaq (2018) found that Social Stories increased the number of compliments students with ASD gave peers and the social engagement of students in the classroom. Wright & McCathren (2012) combined Social Stories and visuals and found robust results of increased

prosocial behaviors and decreased negative social interactions when both were used together. Crozier & Tincani (2007) found that when Social Stories were consistently used with ASD students in preschool, negative behavior in the classroom decreased while prosocial behavior increased. Karayazi et al. (2014) and Samuels & Stansfield (2012) looked at the effects of Social Stories for high school and older students and also found increased prosocial behaviors and decreased inappropriate behaviors when Social Stories were implemented. Golzari et al. (2015) and Balakrishnan & Alias (2017) looked at the prosocial behavior: interacting with others and found increased positive behaviors once the Social Story was implemented. When looking at increased eye contact during conversations, O'Handley et al. (2015) found that Social Stories only minimally increased eye contact with peers during conversation.

How the use of Social Stories helps decrease challenging behaviors in the classroom was also considered throughout different studies. Bordoff-Gerken & Asaro- Saddler (2021), Beh-Pajooch et al. (2011), Graetz et al. (2009), and Lorimer et al. (2002) found that using Social Stories decreased inappropriate behaviors for ASD students in the classroom. Reynhout & Carter (2007) looked at using Social Stories with an ASD student to eliminate distracting behaviors, such as tapping on the desk, and found a decrease in this specific behavior once the Social Story was implemented. Scattone et al. (2006) found different results for each participant during their study. One participant did not show any improvement in appropriate social interaction when the Social Story was implemented, but other participants did. This could have been due to the participant's refusal to participate for the majority of the days the Social Story was used. Cihak et al. (2012) found that using video Social Stories decreased attention-seeking and task-avoidance behaviors in middle school-aged students. Similarly, Schneider & Goldstein (2010) and Vandermeer et al. (2015) saw a decrease in challenging behaviors when a Social Story was used

as a visual support system in the classroom to help with on-task behavior. Kurt & Kutlu (2019) found that Social Stories helped students learn essential life skills such as recognizing strangers and abduction prevention skills. Both Okada et al. (2010) and Mostafa & Mohammed (2012) examined the effects of Social Stories used to eliminate inappropriate manners in ASD students and found positive results. Khantreejitranon (2018) found that Social Stories eliminated inappropriate behaviors such as eating with fingers, moving around during lunchtime, biting and hitting friends, and not sharing toys. Lastly, Benish & Bramlett (2011) found that Social Stories help eliminate aggressive behaviors in ASD students.

Professional Application

The reviewed research demonstrated that the use of Social Story interventions in the classroom with ASD students was successful in increasing communication skills and prosocial behaviors while decreasing challenging behaviors within the classroom. As a special education teacher who works with ASD students, knowing this information about Social Story interventions and the effects for ASD students is very helpful. My goal as a special education teacher is to work with my students and teach them basic skills so they are able to succeed in the classroom. I can take the information from the reviewed research and create Social Stories that are geared toward my students' needs and help them learn how to overcome challenging behaviors by replacing them with appropriate behaviors. Social Stories encourage positive behavior from students with ASD while protecting their self-esteem and by using positive praise. Social Story interventions are a recognizable way to change a challenging behavior into a positive one and see results based on a student's academic and social achievements.

Limitations of Research

This body of research did have limitations. One of the limitations included incorporating many different targeted behaviors in only one Social Story. Adams et al. (2004) found that the implementation of the Social Story had a positive effect on the behaviors of ASD students but wondered if the results could have been even better with a different Social Story that only targeted one of the behaviors.

Another limitation of this research included the sample size of each study. The Social Story interventions were almost all completed with a small group of students or with only an individual student. This is due to the study criteria that needed to be met with the study, such as the requirement that a student has ASD and a specific behavior targeted in the Social Story.

A third limitation of this research included the amount of time the studies took place. Most studies did not have an implementation phase of more than a couple of weeks. Results could have been different and more consistent with changes in student behaviors if the implementation phase had been longer. The data from the follow-up sessions was only collected for a short amount of time after the Social Story was eliminated from student routines. This did not provide information about whether the student's positive behavior continued after the eliminating of the Social Stories.

Lastly, during some research studies, Social Stories were paired with other strategies such as video modeling, positive reinforcement, or adult prompting. Social Stories were not the only strategy used in certain studies making the correlation between the changed behavior and Social Stories weak. Social Stories would have to be the sole intervention variable used to indicate true effectiveness.

Implications for Future Research

Future research should continue to investigate how long the implementation of Social Stories must occur in order for communication skills, prosocial behaviors, and challenging behaviors to be permanently changed. How long for the students to show they learned the behavior before the Social Story could be taken away or will students always need verbal prompts from adults and Social Story reviews throughout their academic career for the positive behaviors to continue? Balakrishnan & Alias (2017) stated that to see the best results, social stories must be used consistently and then revisited periodically to make sure replacement behaviors continue.

Graetz et al. (2009) proposed another piece of information that future researchers should continue to look into: Does the use of personalized photos in Social Stories help make them more meaningful to the student? Do the photos lead to more positive results with Social Story interventions? When personalized photos are used, it creates more engagement with the students due to the real-life connections. Students who refused to participate in the Social Story intervention and did not show improvements in behavior after implementation may have become more interested in the story if they had seen themselves in it.

Lastly, I would like to see more research on the effects of Social stories with students who are diagnosed with other disabilities, such as emotional behavioral disorder (EBD) or other health disabilities (OHD). Would Social Story interventions have the same effect for these students as they did on students with ASD?

Conclusion

The research reviewed in this paper proved that Social Story interventions have a positive effect on increasing appropriate communication and prosocial skills and decreasing challenging behaviors for students with ASD. The studies also showed a strong correlation between an

increase in positive behaviors when combining other strategies with Social Stories, such as video modeling, positive reinforcement, and adult prompting.

Social-emotional learning has become an essential part of the learning process for students in the classroom, especially students with disabilities. Learning different social skills will help students learn how to form relationships, maintain relationships, work with others, complete daily tasks, and prepare them to be successful inside and outside of the classroom. It is essential to implement an evidence-based practice for students. If research continues with effective ways to use Social Stories in the classroom, whether that be solely using Social Stories or pairing them with other strategies, both an increase in academic and behavior success can be evidenced by all students.

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