The Effects of Social Stories on Negative Behaviors
in Social Settings and Situations

by
Elizabeth Wright

Submitted in Partial Fulfillment of the Requirements for the
Degree of Masters of Education

May 2017

Graduate Programs in Education
Goucher College
# Table of Contents

List of Tables i

Abstract ii

I. Introduction 1

Statement of the Problem 3

Research Question 4

Operational Definitions 4

II. Literature Review 5

Introduction 5

Social Skills 6

What is a Social Story and Its Benefits 6

Summary 8

III. Methods 9

Design 9

Participants 9

Instrument 11

Procedure 12

IV. Results 13

V. Discussion 15

Implications 18

Threats to Validity 18

Relationship of the Results to the Literature 19

Suggestions for Future Research 20
List of Tables

1. Positive and Negative Social Behaviors for Two Autistic Students over Six weeks 13
Abstract

The purpose of this study was to evaluate the effectiveness of using social stories to increase positive and decrease negative behaviors in students with autism in social settings and situations. The study was conducted over a six week period involving two preschool aged students diagnosed with autism. The instrument used to gather data was a tally sheet on which the teacher recorded the frequency of positive and negative social behaviors as they occurred during arrival times and developmental play times.
CHAPTER I

INTRODUCTION

Children with autism spectrum disorder (ASD) have varying degrees of delays in social interaction and social communication. These delays impact a child’s ability to display appropriate social skills in order to communicate effectively, use conversational skills, exhibit play skills, understand emotions of others, and deal with conflicts. These skills are critical “foundational skills” (Moody, 2012, p.191) for those with ASD. It is crucial that children with ASD are taught social skills at an early age to help prevent the risk of developing negative and/or challenging behaviors. Teachers in an Early Childhood Intervention (ECI) classroom see students who lack appropriate social skills, causing them to develop negative behaviors in social situations, such as not sharing, getting in people’s personal space to gain attention, aggressions, throwing toys/materials, being non-responsive to verbal interaction, and simply walking away from social situations that they lack the skills to participate in.

Individuals with ASD may seem withdrawn and/or overwhelmed by social situations. In order for an individual to learn the appropriate social rules of various social situations, the rules need to be explained and broken down into smaller parts based on each child’s individual cognitive level and practiced over time. Lack of appropriate social skills can cause a child to have difficulty with developing successful personal relationships, gaining access to their needs and wants, and becoming an active member within their school and home communities.

In developing successful personal relationships it is imperative to possess the skills to communicate verbally and nonverbally with individuals. Children with ASD have difficulty finding the correct words to use to communicate with others, as well as putting their thoughts into an order that is understandable and makes sense to others. Individuals with ASD typically
use one to two words to express an entire thought and/or idea, leaving out the most important parts of that thought and/or idea. For example, a child with ASD may say “red car” repeatedly and what they could be trying to tell you is that they see a red car or they want the red car. This can make it very difficult to try and understand their communication intents. When gaining access to their needs and wants, children with ASD will often times initiate in a negative way rather than using an appropriate social response. For example, a student with ASD may take a toy from a friend instead of requesting a turn with a toy. Verbal models can be given such as “may I have a turn” or “turn please” in order to reinforce the appropriate social response.

Becoming an active member within a school and home community means effectively communicating with those in your environment. Individuals with ASD have a hard time participating in conversations with multiple turns because it is harder for them to keep up with the conversations and follow along. They will often times have to be prompted to respond to individuals, as well as be given a model of the verbal language to use in order to participate in communication exchanges within conversations.

Reading nonverbal cues is another difficulty individuals with ASD display. They have a hard time reading body language, facial expressions and tone of voice. These are important skills to have when participating in communication exchanges with others. Being able to read non-verbal communication is important in order to receive the full message a person is trying to communicate. Typically, younger children with ASD resort to tantrums in order to communicate their frustrations because of their lack of communication and skills.

Social skills training is used to support the development of social skills in individuals with ASD. There are many components of social skills training such as social skills groups where individuals can practice social skills repeatedly with each other, and/or typically
developing peers, the CSEFEL program (Center on the Social and Emotional Foundations for Early Learning) which focuses on promoting social emotional development, computer and technology programs that involve videos and software to teach social skills, and social stories and/or social scripts that teach specific social situations. These interventions all aim to teach individuals with ASD the appropriate social responses to interactions that they may encounter within their school, public and/or home environment.

Individuals with ASD have a “limited interest in reciprocal social interactions, or they may have an interest in interacting with others but lack the necessary skills to do so effectively” (International Journal of Special Education, 2011, p. 58). Due to the lack of communication skills, social stories are written to “share accurate social information and to promote social understanding” (Quilty, 2007, p.128). They provide step by step instructions on how to appropriately behave in social situations. Each page of a social story explains one concept. Since many individuals with ASD are visual learners, each page will also have a picture to accompany the text. Social stories are read to individuals before taking part in a specific social situation in order to teach them the appropriate responses. Social stories are read several times in order to reinforce the appropriate social behaviors that are being explained, and for comprehension.

**Statement of the Problem**

Interventions, such as social stories, are used to teach children at an early age how to respond to specific social situations (Delano & Snell, 2006). The purpose of this study was to evaluate the effectiveness of using social stories to decrease negative behaviors in students with autism in social settings and situations.
Research Question

Does using social stories with Pre-K students diagnosed with autism increase positive social behaviors in social settings and situations?

Operational Definitions

The independent variable used in this study was the use of the social stories that are targeting the specific negative behaviors. Social stories are defined as a story written to decrease a negative target behavior in students with autism in social settings and situations.

The dependent variable used in this study was the change in the student’s specific targeted behavior(s) in the social setting and/or situation. The change in the student’s behavior is defined as either a positive or negative increase in the targeted behavior. Positive behaviors during greetings for Student A include, responding verbally “hi” and/or waving hand to gesture “hi”. Negative behaviors during greetings for Student A include, being non-responsive, walking away, and/or saying “no”. Positive behaviors during play for Student B include, sharing toys/offering toys and/or taking turns. Negative behaviors during play for Student B include, not sharing toys, leaving area, hitting, and/or throwing.
CHAPTER II

REVIEW OF LITERATURE

This literature review examines the effectiveness of using social stories to decrease negative behaviors in students with autism spectrum disorder (ASD) in social settings and situations. The first section provides an introduction to ASD and the characteristics that accompany this disability. The second section provides an overview of the importance of social skills. The last section introduces what a social story is and the benefits it provides to students with ASD.

Introduction

Autism spectrum disorder is characterized by impairments in social interactions and communication as well as restricted ranges of behavior (American Psychiatric Association, 2000). The umbrella of ASD includes Asperger’s syndrome, atypical autism, pervasive developmental disorder and disintegrative disorder. The continuum of impairments can range from mild to severe. Individuals with ASD have a slower processing rate, which in turn disrupts learning and processing of information. ASD impacts one’s ability to verbally communicate with adults and family members, form relationships with peers, respond appropriately to others, use eye contact, express emotions, pay attention to others, show empathy, and initiate interactions independently (Crozier & Sileo, 2005). Those with ASD prefer to have very structured routines and environments with known limits and expectations. They may be resistant to changes in routines and may become visibly upset and try to manipulate a situation to benefit them in order to keep their routines and rules in place and consistent.
Social Skills

Making requests, responding to and initiating with others, maintaining turn-taking conversations, expressing emotions and feelings, and being able to communicate your needs and wants are the groundwork for appropriate social skills. These skills are critical “foundational skills” (Moody, 2012, p.191) for those with ASD. These skills are used in a variety of social situations such as play, turn-taking, peer and adult interaction, greetings and farewells, and communication in general. Social skills are critical to the development of successful personal relationships and being able to get your needs and wants met, as well as communicating them. At an early age, children with ASD are at a higher risk of developing inappropriate and/or challenging behaviors due to the lack of their ability to socially interact and communicate with others. Delano and Snell (2006) state that these inappropriate and/or challenging behaviors “may serve as a form of communication when language and social development are delayed” (p. 29). Interventions at an early age can reduce the number of challenging behaviors by providing a beginning foundation for children to communicate. They are provided alternative ways to communicate with others in order to reduce the risk of developing challenging behaviors and increase their communication skills. It is said that the earlier interventions begin in children’s lives, the better the outcomes. (National Research Council, 2001).

What is a Social Story and Its Benefits?

Gray and Garand introduced the social story as a method of teaching children with autism how to “read” social situations (Delano & Snell, 2006, p. 29). Social stories can be used for a variety of different reasons within the child’s environment. Gray (as cited Ivey, Heflin & Paul, 2004) suggested three purposes for social story use: “(a) describing a situation and appropriate behaviors, (b) explaining simple, understandable steps for certain goals, and (c) teaching new
routines and anticipated actions” (p.164). Social stories provide the who, what, when, where and the why of a specific social situation. They can be used with individuals of a variety of ages. When written, social stories should be written in the first person, in the present tense, and on the child’s developmental skill and comprehension level. It is important when writing social stories that the author does not use terms like *always* or *every* due to the possibility of the situation changing. Using terms like *usually* allows for some flexibility in the story in case of any changes or differences.

There are four basic sentence types used when writing a social story; descriptive, perspective, directive and affirmative. Descriptive sentences define “who is involved, where the situation takes place, what is happening, what is expected, and why” (Ozdemir, 2008, p. 1689). These types of sentences are truthful, free of opinions, and factual. An example would be, *when people are inside, they walk.* Perspective sentences “describe what others may be feeling or thinking” (Ozdemir, 2008, p. 1689). An example is, *my teacher likes math. If I need a break, I can put the break card on my desk* is an example of a directive sentence. These sentences describe a desired response to a social situation. Affirmative sentences express a “commonly shared value or opinion within a given culture” (Reynhout & Carter, 2006, p. 445). An example would be, *students try to follow the teacher’s directions, and this is a good thing to do.* Two additional sentences were added to the format of the social story. A control sentence that relates to a specific child to help remind them of the story. An example would be, *I need to eat my vegetables to make me big and strong; just like a steam train needs coal to stay running.* The cooperative sentence describes how others will support the student. A cooperative sentence might be, *If I need help I can ask a teacher or a friend.*” When composing a social story a ratio of “2 to 5 descriptive, perspective, and/or affirmative sentences for every 0 to 1 directive or
“control sentence” (Delano & Snell, 2006, p. 29) should be used. Using this ratio ensures the emphasis of the story is on “descriptive and assuring qualities, not on directing or controlling the individual” (Ivey et al., 2004).

Since individuals with ASD tend to be visual learners, socials stories are a positive way to teach a specific activity and the behaviors that are expected in that particular situation. Pictures can be used as a supplement to the story itself. Using real pictures of the students, items in the classroom, etc. is most beneficial in that they are able to “see themselves” in that particular social situation. Social stories are written to prepare individuals for changes to their schedules, to better help understand other’s thoughts and feelings, learn problem-solving behaviors, and increase appropriate behaviors. Once the story is introduced and read with an adult a few times, the student can then read the story independently. Social stories provide concrete instruction that can be referred to repeatedly until the skill is mastered. It is most beneficial for the story to be accessible at all times in order for the student to be able to refer to if needed for reminders.

**Summary**

A solid foundation of social skills prepares students for later academic achievements as well as promotes positive interactions with others and the environment. Social stories are a beneficial intervention to teach students with ASD what is expected in a variety of social situations. Social stories are user-friendly by students, teachers, and family members. They provide a coaching teaching model that can be faded out when skills are mastered, but can also be referred back to if reminders of expectations are needed.
CHAPTER III

METHODS

The purpose of this study was to evaluate the effectiveness of using social stories to decrease negative behaviors in students with autism in social settings and situations.

Design

The study used a descriptive design. The positive and negative social behaviors of two autistic pre-kindergarten students were recorded daily by the teacher on an observation form for six weeks.

Participants

The students who participated in this study attended an Anne Arundel County comprehensive elementary school serving students in pre-Kindergarten through fifth grade ages ranging from three to 11 years old, with a total population of 441 students. Of those 441 students, 196 are female and 245 are male. Demographic information includes 390 Caucasian students. Of those students, 48 are in special education, 0 are English Language Learners (ELL) students, 12 are on 504 Plans and 59 are Free and Reduced Meal Students (FARMS). Of the 16 multi-racial students, 0 are in special education, 0 are ELL students, 0 are on 504 Plans and 9 are FARMS students. Of the 17 African American students, 2 are in special education, 0 are ELL students, 0 are on 504 Plans, and 8 are FARMS students. Of the 2 American Indian students, 0 are in special education, 0 are ELL students, 0 are on 504 Plans, and 1 is a FARMS student. Of the 15 Hispanic students, 2 are in special education, 1 is an ELL student, 0 are on 504 Plans, 8 are FARMS students, and 1 Asian student who is not receiving special education, 504 services, ELL or free and reduced meals. The study school is a Positive Behavioral Interventions and Supports (PBIS) schools where students earn Rocky Tickets for showing Rockies 3 R’s, being
Respectful, Responsible and Ready to Learn. Being a PBIS school helps to define, teach, and support appropriate student behaviors to create a positive school environment.

The students who participated in this study were enrolled in the Early Childhood Intervention (ECI) classroom at the elementary school. The class consisted of one special education teacher, one para-educator, one temporary support assistant, and 10 students. All 10 students were receiving services on an Individualized Education Program (IEP). The two students who were selected for this study had a diagnosis of autism and displayed negative behaviors in social settings and situations.

Student A was a Caucasian male and was 5 years, 1 month and 29 days old. He is an only child and lives with his biological mother and father, two dogs and one cat. He was diagnosed with autism by Kennedy Krieger at the age of 4 years 8 month old. Student A attends the ECI classroom five days a week and receives 12 hours and 30 minutes of special education services weekly, six 30 minute sessions of speech and language services monthly and transportation services to and from school. Student A is fully verbal and benefits from repetition of directions, visuals aids when needed (PECS Symbols, First/Then, Picture Schedules for various activities such as schedules, table work etc.), encouragement/reinforcement of appropriate behavior in academic and non-academic settings, gaining attention prior to speaking and/or giving directions and extended wait time in the classroom to better assist him throughout his day.

Student B was a Caucasian male and was 5 years, 1 month and 5 days old. He is an only child and lives with his biological mother and father. He was diagnosed with autism by an Anne Arundel County Public School, School Psychologist at age 3 years 4 months old. Student B attends the ECI classroom five days a week and receives 12 hours and 30 minutes of special
education services weekly, six 30 minute sessions of speech and language services monthly, two 30 minute sessions of Occupational Therapy session monthly, one 30 minute session of physical therapy monthly, one hour of Home Based Parent/Child Training weekly and transportation services to and from school. Student B has a limited vocabulary for communication and benefits from repetition of directions, visuals when needed (PECS Symbols, First/Then, Picture Schedules for various activities such as schedules, table work etc.), encouragement/reinforcement of appropriate behavior in academic and non-academic settings, gaining attention prior to speaking and/or giving directions and extended wait time, a highly structured setting/routine with known limits and expectations, frequent changes in activity or opportunities for movement, strategies to initiate and sustain attention, referential seating, and frequent sensory movement breaks in the classroom to better assist him throughout his day.

**Instruments**

The instrument used to gather data was a tally sheet; a copy is attached as Appendix A. Each time a target behavior was observed, a tally mark was placed in the appropriate column for both positive and negative behaviors. The teacher recorded data on a daily basis during arrival times and developmental play centers. Anecdotal notes were also recorded for additional data. The targeted positive behaviors for Student A included responding verbally “hi” and/or waving hand to gesture “hi”. Negative behaviors for Student A included becoming nonresponsive, walking away and/or verbally responding “No”. The targeted positive behaviors for Student B included offering toys and/or taking turns with toys with and without prompting. Negative behaviors for Student B included not sharing toys, leaving the area when prompted to share and take turns, hitting with an open or closed fist and/or throwing toys.
Procedures

Each social story was developed based on the student’s negative behavior as well as his developmental level. The social stories were introduced after a five-day baseline data collection period. During this time the teacher observed the number of times Student A and Student B engaged in positive and negative behaviors to get a baseline in order to compare results at the conclusion of the study. At the end of the five-day baseline time period, the social stories were introduced. Student A was read his social story after he entered the classroom and put his belongings in his locker. Student B was read his story before going into development play centers. The study was completed over a six-week period, and data was collected on a daily basis. Days off from school and absences were recorded on the data sheets. The social stories are attached as Appendix B.
CHAPTER IV
RESULTS

The purpose of this study was to evaluate the effectiveness of using social stories to decrease negative behaviors in social settings and situations in students with autism.

Two preschool-aged students who were diagnosed with autism were read social stories at arrival times, and before playtimes, in order to increase their positive social behaviors, such as verbally greeting individuals, waving a hand, offering toys, and taking turns with peers. The students were observed at arrival times and playtimes, and the frequencies of behaviors were recorded. The results of the observations of the two students are reported in Table 1.

Table 1
Positive and Negative Social Behaviors for Two Autistic Students over Six weeks.

<table>
<thead>
<tr>
<th>Student A</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td>Responds “Hi”</td>
<td>Waving</td>
<td>Non-responsive</td>
<td>Walking Away</td>
<td>Verbally responding “No”</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student B</th>
<th>Offering Toys</th>
<th>Taking Turns</th>
<th>Not Sharing Toys</th>
<th>Leaving the Area</th>
<th>Hitting</th>
<th>Throwing Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
A statistical test was not appropriate due to the study being a descriptive study, the small number of participants, and the fact that the specific behaviors being observed were different for each student. A discussion of the observations during the study is presented in Chapter V.
CHAPTER V
DISCUSSION

The purpose of this study was to evaluate the effectiveness of using social stories to decrease negative behaviors in students with autism in social settings and situations. This study explored the research question, “Does using social stories with Pre-K students diagnosed with autism increase positive social behaviors in social settings and situations?” An examination of the compiled frequency data showed that the social stories introduced increased some positive social behaviors in social settings and situations in both Student A and B. Overall, some positive social behaviors increased for both students and some negative social behaviors decreased from baseline after the social story was introduced.

The results of the study for Student A show that his positive social behaviors including verbally responding to “Hi” and waving his hand, increased from the first week in baseline before the social story was introduced. During the first week in baseline, Student A was observed responding verbally by saying “Hi” 2 times. Over the six week study, the number of verbal responses of “Hi” decreased by 2 in week two and then increased by 1 in week 3, and remained the same for weeks three through five before increasing by 2 verbal responses in week six. During baseline and week two, he was observed waving his hand to gesture “Hi” 1 time before increasing his gesture in week three to 2 times. In week four the number of gestures observed to wave “Hi” increased to 4 before decreasing by 2 in week 5. In the final week of the study, he increased again by 1, showing an overall improvement from baseline to week six. Both behaviors of responding verbally to “Hi” and waving his hand to gesture “Hi” showed an increase after the social story was introduced. Negative behaviors that decreased included being non-responsive and verbally responding “No”. During the first week in baseline, Student A was
observed being non-responsive 3 times. This behavior decreased to 0 in week two before increasing to 4 times in week three. During week four the behavior decreased again to 1 time observed being non-responsive. In week five, this behavior once again increased to 5 before drastically decreasing to 0 times observed in week six. Although there is a decrease in this behavior from baseline to week six, it is difficult to say if the social story is the cause due to the drastic changes from week to week. In week one of the study, Student A verbally responded “No” to a greeting 4 times. This number of responses increased by 1 in week two before decreasing to 0 negative responses in week three, and remaining the same in week four. In weeks five and six, Student A was observed verbally responding “No” to a greeting 1 time, showing an overall decrease in this negative behavior. The negative behavior of walking away remained the same in baseline and at the conclusion of the study, with no significant changes over the six weeks. Throughout the study, data was collected for Student A during arrival times. During the six week study, Student A missed 4 days due to illness and 5 days due to school being closed because of scheduled days off, weather closings’ and a power outage. On three separate days throughout the study, Student A arrived at school visibly upset, and refusing to get off the bus thus requiring full teacher assistance. On these three days no positive social behaviors were observed after reading the social story. Upon returning from a day off due to a power outage following a snow day, Student A independently requested to read his social story after arriving at school.

The results of the study for Student B show an increase in the positive behaviors of offering toys to peers and taking turns with peers from baseline. During the first week in baseline and in week two, Student B was observed offering toys to his peers 1 time. In week three Student B attended school for two days in which he was not observed on either day sharing
toys with peers. In week four, he was observed sharing toys with peers 3 times. During week four, Student B was observed offering a non-preferred toy to his peer in order to gain access to a preferred toy that a peer was playing with. In week five, he decreased his offering of toys to 1 before increasing again in week six. In the final week of the study, he was observed offering toys to peers 4 times, which is an overall increase from baseline. Negative behaviors that decreased after the social story was introduced include hitting and throwing toys. During week one, Student B was observed hitting during development playtime 2 times. This behavior remained constant until week 4, when it decreased to 0 times observed. In week five the hitting increased to 1 and remained the same in week six, showing a decrease in hitting from baseline. Throwing toys also decreased from baseline to week six. In baseline, Student B threw toys 4 times. This decreased in week two to 3 times, and then again in week three to 2 times, and in week four to 0. There was an increase in hitting to 1 time observed in week five, which also remained the same in the final week of the study; again showing a decrease in hitting from week one. Not sharing toys with peers and leaving the area remained the same, both in baseline and at the conclusion of the study, with 0 of the behaviors being observed. Throughout the study, data was collected for Student B during development play times. During the six week study Student B missed 1 day due to illness, and 5 days due to school being closed because of scheduled days off, weather closings and a power outage. On two separate days within the six week study, data was not collected due to the data recorder being out of the classroom. On another separate occasion, data was not collected because Student B was with a related service provider in another location. Upon returning from a weekend and/or day off from school, Student B had the most difficulty producing positive social behaviors even after reading his social story.
Implications

After completing the study and analyzing the data, both Student A and B increased their use of some positive social behaviors as well as decreased some of their negative social behaviors displayed in social settings and situations. Student A increased his ability to verbally respond to “Hi” and waving his hand to gesture “Hi”. Student A decreased being nonresponsive and verbally responding “No” when an individual initiated communication with him. Student B increased his ability to offer toys and take turns with peers during developmental play times. Student B decreased his hitting, as well as throwing toys during developmental play times with peers. Although both students were read different social stories the result of the stories impacted their behaviors during the study. When looking at social stories to improve behaviors it is important to specifically target which behavior you are trying to increase, and which behavior needs to decrease. For this particular study, both students increased positive behaviors and decreased negative behaviors targeted. Implications for other students would be dependent upon each individual and how they respond to social stories tailored to their specific needs. Since individuals diagnosed with autism have a wide range of strengths and weaknesses it is difficult to say that all individuals would respond in a positive manner to social stories like Student A and B in this particular study. Using this intervention within the classroom would be helpful to teachers that have students with autism if the social stories were tailored to their needs. More and more teachers are using social stories within the classroom to change behaviors making it a growing intervention with a positive effect on behaviors.

Threats to Validity

There are several potential factors that threaten the validity of the study. Threats to the validity of this study included the sample size, duration, data collection times, and researcher.
The sample size for this study was two students. The small sample size may have made it difficult to generalize the results to a larger population. The study was conducted over a six week period which may have not been enough time to gather significant data or for the behaviors to become internalized. The number of days missed by the students may have also caused a threat to validity. Days missed could have impacted the end results based on the number of days that data was not recorded. Data was recorded for 21 days out of 25 opportunities. The times that data collection occurred may have been limited. Both students could have exhibited social behaviors at other times throughout the school day when data was not being collected. The classroom teacher was the researcher for this study. The teacher in the classroom may have been more subjective while observing and recording data than someone that was unfamiliar with the students.

**Relationship of the Results to the Literature**

Crozier and Sileo (2005) state that “over the past decade, social stories have become a popular intervention strategy used among practitioners” (p. 27). In the classroom, teachers are using social stories to improve behaviors, introduce new skills and routines, and to teach socially appropriate responses in a variety of social situations. Although past research evaluating the effectiveness of using social stories as an intervention to improve behaviors has been limited (Delano & Snell, 2006), results of this study were comparable with previous studies. Previous studies conducted with pre-k aged students also showed an increase in appropriate social behaviors, and a reduction in inappropriate social behaviors across all participants.

Crozier and Tincani (2007) conducted a study of three preschool students and the effects of social stories to improve the behaviors of sitting appropriately during circle, socially interacting, and replacing inappropriate play behaviors. An increase in appropriate behaviors in
all three students was reported in their study. Their findings also revealed that the students’ classroom teachers noted a noticeable difference in behaviors. One teacher agreed to incorporate the social story into her classroom, as well as create additional social stories to address other challenging behaviors.

**Suggestions for Future Research**

For future studies, there should be a larger number of participants included in the study. This will allow the researcher to determine whether the effects of a social story to improve behaviors is statistically significant. Including students with similar social difficulties will also improve the results of the study, in order to compare the increase or decrease in similar social behaviors after the social story interventions are introduced. Further research also needs to be conducted to see if the increase in positive social behaviors is maintained, or if it decreases after the intervention has stopped. In addition, in future studies, the length of time should be extended in order for the researcher to see if implementing the intervention for a longer period of time will show a continued improvement in social behaviors. An extended study will also allow the researcher to look at how long after the intervention was introduced that the behavior increased or decreased, and other trends in data collected.
References


doi://dx.doi.org.goucher.idm.oclc.org/10.1007/s10803-006-0086-1
Appendix A

Student A

<table>
<thead>
<tr>
<th>Date</th>
<th>Responding verbally “hi”</th>
<th>Waving hand to gesture “hi”</th>
<th>Non-responsive</th>
<th>Walking away</th>
<th>Verbally responding “No”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student B

<table>
<thead>
<tr>
<th>Date</th>
<th>Offering toys</th>
<th>Taking turns (with/without prompting)</th>
<th>Not sharing toys</th>
<th>Leaving the area when prompted to share and take turns</th>
<th>Hitting (open or closed fist)</th>
<th>Throwing toys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Student A - Social Story

Greeting Others

I can greet my teachers at school or in the classroom. I can greet my friends at school too!
I can greet teachers and friends while using my words to say, “Hi”.
I can greet teachers and friends while waving my hand to say, “Hi”.
When I say “Hi” to teachers and friends I need to use a nice voice.
Screaming hurts my teachers and my friend’s ears.
Using my words and waving my hand are nice ways to say “Hi”.
Saying “Hi” is fun! It will make my teachers and friends happy when I say “Hi” to them. I will be ok.

Student B - Social Story

Playing Nice with Friends

I like to play with toys. I have lots of fun playing with toys.
When I play with toys I need to share them with my friends.
We need to take turns with the toys. It cannot be my turn all the time.
When I take turns with a toy I can pick another toy to play with while I wait.
There are lots of different toys. I can have fun playing with all the toys.
I will not take toys away from my friends. I will wait for my turn.
I will not throw toys if I have to share. I will wait for my turn. I will stay calm.
I will share the toys. I will take turns with the toys.
My friends are happy when I share the toys. I will be a good friend. I will be ok.