The Effects of Social Stories on the Social Interaction and Behavior of Students with Autism Spectrum Disorders

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The Effects of Social Stories on the Social Interaction and Behavior of Students with Autism Spectrum Disorders

Alana Ventimiglia

St. John Fisher College

Advisor: Dr. Schultz
Abstract

Students with disabilities, including those with autism spectrum disorders are increasingly being educated in the general education setting. Professionals working with students with autism spectrum disorders may implement a variety of interventions to improve the social interaction and behavior of such students. A current method used with students with autism spectrum disorders is the social story intervention. This project seeks to expand the research base related to social story use through examining the current literature and surveying special education teachers, speech/language therapists, behavior therapists, and teacher aides working with special education students. Though the research is limited, the results of social story use seem promising and may provide potential benefits to students with autism spectrum disorders and other special needs.
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Students with disabilities are increasingly being educated in the general education setting, including those students with autism spectrum disorders. Children with some form of autism may experience delays in several areas, and two such areas are language and social development. When children with autism are unable to express themselves with words they may express themselves through their behaviors, many of which are challenging or inappropriate in social settings. Improving the social interaction of children with autism spectrum disorders, so they may communicate with others in a more appropriate manner, is a major goal of classroom intervention (Delano & Snell, 2006).

Special education teachers and other professionals working with children with autism may implement a variety of interventions to decrease inappropriate social behaviors and improve interaction. One intervention used to improve the social interaction of children with autism is the social story intervention (Adams, Gouveios, VanLue, & Waldron, 2004). Social stories may be introduced to children with autism to help them cope with change, teach about the feelings of others, or “teach specific social skills as alternatives to problem behaviors” (Kuoch & Mirenda, 2003, p. 219). While social story interventions have been useful in improving the social interaction of children with autism, the research base regarding social story effectiveness is limited. Further research is needed to support the use of social story interventions as an effective intervention for social skills development in children with autism spectrum disorders (Sansoti, Powell-Smith, & Kincaid, 2004).

Though the research base regarding effectiveness is limited, there appears to be a variety of literature focused on social stories, for example, what a social story is, and how it is used. Several researchers have examined the intervention through studies of social story use, however the studies reviewed tend to follow a small number of children through the intervention process.
A study is limited when a small number of students in only one classroom are assessed (Barry & Burlew, 2004). According to Soenksen and Alper (2006), researchers need to use social stories with children of different ages and ability levels. Social story interventions may be successful with different populations of students.

The current project seeks to examine the use of social stories with children with autism spectrum disorders, focusing on the effects on social interaction and behavior. While there is current research on social stories, much more is needed to determine the potential benefits to children of varying ages and ability levels. A review of literature will examine the use and potential effectiveness of social story intervention for students with autism. This review will be followed by current research that surveys special education teachers, teacher aides, behavior therapists, and speech/language therapists; the findings will yield the professionals’ use of, results, and attitudes related to social story intervention in the classroom setting.

**Autism Spectrum Disorders**

Autism spectrum disorders impact the lives of children throughout the world, affecting children and families of diverse backgrounds. According to the National Institute of Mental Health (2007), early diagnosis and intervention may play a key role in reducing a child’s symptoms and improving his or her achievement. Although only half of children with autism are identified before kindergarten, signs and symptoms of spectrum disorders may be noticed earlier in a child’s life. Symptoms of autism range in severity, but there are several characteristics common to all children with an autism spectrum disorder. Such characteristics include deficits in “social interaction, verbal and nonverbal communication, and repetitive behaviors or interests. In addition, they will often have unusual responses to sensory experiences” (National Institute of Mental Health, 2007, p. 4). Each child diagnosed with some form of autism varies greatly from
one another, with different strengths, needs, and interests present. It is important for every child to be treated as an individual, rather than a label.

As mentioned, one area of concern for children with autism spectrum disorders is social interaction. Children with autism tend to have difficulty in everyday social situations that may be apparent from a very early age. For example, children with autism may shy away from attention and parental attachment; they may prefer time alone to time spent in the company of others (National Institute of Mental Health, 2007). This lack of attention and/or attachment may be especially difficult for parents and other family members to accept.

While children with autism spectrum disorders have difficulty in social situations, they also have difficulty interpreting social cues; establishing the meaning of both verbal and nonverbal cues may be a complex task for this population. Perspective taking and the control of one’s own emotions may not develop quickly, with children acting in inappropriate ways to express themselves (National Institute of Mental Health, 2007). For example, children with autism spectrum disorders may aggress toward themselves or others, tantrum, or destroy property when they are unable to use words to express their emotions, wants, or needs. They may act in ways others do not find acceptable because they have not yet developed the communication skills necessary to do so in a more socially appropriate way. As noted by Delano and Snell (2006), challenging behavior often becomes a system of communication. Improving language and communication is a significant goal for those working with children with autism.

Children with autism develop language later in life than children who do not have autism, or they may permanently remain mute or nonverbal. While many children begin to speak as infants or toddlers, many children with autism may not begin speaking until they have entered school or even later. Children who do develop language may speak in different ways, for
example, they may be unable to form complete sentences or appropriately participate in conversation with others. Children with autism often have difficulty interpreting body language, tone or pitch, and speech that contains sarcasm (National Institute of Mental Health, 2007). What others say may be taken very literally or interpreted in ways different from what the speaker intended.

Deficits in social interaction and language/communication development may be accompanied by problem behaviors in children with autism. For example, children with autism may display aggressive behaviors such as hitting, tantrum behaviors, self-injurious behaviors, etc. They may also engage in repetitive behaviors that may seem peculiar to other children and adults. Some characteristic behaviors include hand flapping, walking on toes, or preoccupation with a particular object or topic of interest (National Institute of Mental Health, 2007). While such behaviors may be the “norm” for children with autism spectrum disorders, they may further distinguish them from typically developing peers. Interventions aimed at improving social interaction and behavior may focus on establishing socially acceptable actions and responses that encourage inclusion (Sansoti, et al., 2004).

Social Stories

Improving the social interaction of children with autism spectrum disorders is an important goal of those working in the field of special education. Interventions should be focused on social functioning and the development of socially appropriate responses and behaviors (Delano & Snell, 2006). One type of intervention currently used to improve the social interaction of children with autism is the social story intervention. Social stories may be written in different ways depending on the individual student and his or her needs and abilities and have promising effects (Hagiwara & Myles, 1999). There are general guidelines for social story
writing and use, but an important aspect of social stories is that they are individualized for each student with words and pictures.

Though social stories may serve different purposes for each child, they are focused on social skills and appropriate behaviors. As stated by Delano and Snell (2006):

A social story is a short story that describes the salient aspects of a specific social situation that a child may find challenging. Social stories also explain the likely reactions of others in a situation and provide information about appropriate social responses (p. 29).

Social stories provide the child they are written for with social information he or she may not have and help facilitate the development of alternative behaviors (Kuoeh & Mirenda, 2003). Social stories walk children with autism spectrum disorders through a given social situation and break down the situation into understandable terms. A unique aspect of social stories is that they give control to the child and are written from the child’s perspective (Scattone, Tingstrom, & Wilczynski, 2006). Social story sentences are written in the first-person and contain words such as “I,” “me,” and “my.” Since a social story is written from the child’s perspective, he or she may feel a part of the story and in control of the situation.

Social stories are written according to a format developed by Carol Gray. The stories contain four sentence types, including descriptive, directive, perspective, and control sentences. Descriptive sentences “describe,” stating what people do in a given social situation through a breaking down of steps. Directive sentences state the desired behavior and provide appropriate social responses for the individual, while perspective sentences focus on the reactions of others in the particular social situation. Finally, control sentences identify “strategies the person can use to facilitate memory and comprehension of the social story” (Goldberg Edelson, 1995). Two to five descriptive and/or perspective sentences should accompany every one directive and/or control sentence (Goldberg Edelson, 1995). Descriptive, directive, perspective, and control
sentences are all used to address a social situation that the individual child with autism finds challenging.

The situations and settings addressed in social stories seek to produce a change in a child's social functioning. Researchers, educators, and other professionals who implement social story interventions may do so to teach perspective taking and how to appropriately respond in social settings (Delano & Snell, 2006). Social stories might also seek to replace inappropriate behaviors with more positive and socially acceptable behaviors (Kuoch & Mirenda, 2003). The purpose for writing a social story and implementing its use will vary depending on the individual child and his or her needs, abilities, and interests. In addition to studying the implementation of social story interventions, researchers have also studied their effectiveness (Sansoti, et al., 2004).

A review of past and current research related to social story interventions revealed several studies associated with effectiveness. Delano and Snell (2006) used a social story intervention with three children with autism to increase the frequency of four identified social skills, including “seeking attention, initiating comments, initiating requests, and making contingent responses” (p. 31). During the intervention and generalization phases, six typical peers served as play partners for the participating students with autism. Social stories were written to increase the students' interaction with peers in the classroom setting.

After the social story interventions took place, positive effects were seen in the social interaction of two of the participating students. These two participants showed an increase in level of social interaction and engagement; they were more involved with their peers and displayed some of the targeted social skills. Researchers found that the students showed improvement with contingent responding and comment initiation. However, the third student with autism did not show much improvement in social interaction (Delano & Snell, 2006).
Though the results of this study did not reveal improvement in one of the students, the results are still promising due to the increased interaction of two out of three participants. Similar results were found in an in-depth review of social story related literature.

The study conducted by Delano and Snell (2006) found promising effects related to social stories and increased social interaction. Scattone et al. (2006) conducted a similar study designed to increase the appropriate social interaction of three students with autism. The participating students did not actively participate in conversation with peers though they were each verbal. Researchers developed a different social story for each individual student that was focused on appropriate peer interaction. Scattone et al. (2006) defined appropriate social interaction as:

- a verbal, physical, or gestural initiation or response to a peer; a comment or question related to the activity or conversation;
- continued engagement in the same activity as the peer; a response to a peer’s comment or question with a comment related to the conversation; an initiated comment or question related to the conversation; or a physical gesture such as nodding to indicate approval or disagreement (p. 214).

With the introduction of social stories to each of three students, two of the students demonstrated improvement in levels of social interaction, similar to Delano and Snell’s (2006) study. Also, the third student did not show significant improvement. Interestingly with this study, the two students who showed marked improvement read their own social stories; the third student had his story read to him. The researchers posed the need for investigation of students being read to versus reading their own social stories though positive effects were noticed (Scattone, et al., 2006). It is unclear if certain populations of students (e.g., readers and nonreaders) benefit from social story intervention more than others. Other studies reviewed did not address this issue.
The two previous studies both focused on increasing social interaction in students with autism spectrum disorders. Another study conducted by Soenksen and Alper (2006) was designed to improve social interaction and engagement through increasing a student’s attempts to gain the attention of others. However, in this study a group of students without disabilities participated in social story readings as well as the target student. Though other students listened, only the target student was observed. The social story was read to the students before target activities such as math, choice time, and recess. Prior to social story intervention, the target student tried to gain his peers’ attention with a mean frequency of zero. With the introduction of a social story, the student’s attempts to gain the attention of his peers increased. Also, the student maintained his improved social skills during the follow-up phase. Researchers noted that the target student sought to gain attention with the same frequency as the other students in the class without disabilities. The results of this social story intervention provide further proof of the effectiveness of social stories, but are somewhat limited because only one student participated in the study (Soenksen & Alper, 2006).

As suggested by Soenksen and Alper (2006), social stories should be used with children of different abilities and ages. While the previous studies were conducted with students identified as having autism, Sansosti and Powell-Smith (2006) studied the effects of social story use with a student with Asperger Syndrome. Like autism, Asperger Syndrome is an autism spectrum disorder. Children with Asperger Syndrome display many characteristics similar to those of children with autism, but to a lesser extent. Asperger Syndrome is a mild and high functioning form of autism (National Institute of Mental Health, 2007).

Sansosti and Powell-Smith (2006) studied the effectiveness of social stories with regard to increased social engagement skills. However, unlike many other studies, this social story
intervention was implemented at home and in the presence of a parent and/or guardian. The researchers designed a study to examine the effects of social stories written to increase the target social behaviors of three students with Asperger Syndrome. The identified behaviors were sportsmanship, maintaining conversation, and joining in. During this intervention, social stories were read at home twice a day both before and after school (Sansosti & Powell-Smith, 2006, p. 46). As in previous studies, this social story intervention produced positive results in two of three participating students. The two students demonstrated increased social engagement during the intervention, but unfortunately did not maintain their target behaviors during follow up (Delano & Snell, 2006; Sansosti & Powell-Smith, 2006; Scattone et al., 2006). However, the improvements in social engagement during intervention continue to offer promise for social story use in children with autism spectrum disorders, including those with Asperger Syndrome.

Though this and previously reviewed studies evaluated the effectiveness of social stories with relation to social interaction and/or engagement, others have focused on decreasing inappropriate social behaviors.

Adams et al. (2004) studied the effectiveness of social stories in decreasing “socially inappropriate and undesirable behaviors” in an elementary school student with autism (p. 88). Researchers identified four target behaviors, which included crying, falling, hitting, and screaming. The participating child displayed these behaviors with the greatest frequency and these inappropriate behaviors were addressed with a social story. The researchers wrote a social story for the student that described the target behaviors in the context of homework completion; positive alternative behaviors were also included in the story. With the introduction of this social story, the student experienced decreases in each of the four identified problem behaviors. For example, the number of crying episodes decreased by 48 percent and screaming decreased by 61
percent. The student experienced similar decreases in falling (74 percent) and hitting (60 percent). The social story helped the child see that inappropriate behaviors during homework time could be replaced with more appropriate behaviors such as asking for help (Adams, et al., 2004).

The results of the Adams et al. (2004) study support the effectiveness of social stories, but are limited because only one child experienced the intervention. The study was effective in decreasing socially inappropriate and/or aggressive behaviors in one child with autism. Although the participant experienced the social story intervention at home, positive effects were noticed in the classroom setting as well. The student's teacher noticed a decrease in crying and improved responses to frustration while at school (Adams, et al., 2004). Future research is needed to examine the use of social stories in both the home and school settings, comparing results and possible generalization. This social story intervention by Adams et al. (2004) produced positive effects in school though it was implemented at home. Research is lacking which examines the effects social story reading in the school setting has on decreasing inappropriate behaviors at home.

The Adams et al. (2004) study examined the effectiveness of social stories with regard to decreasing socially inappropriate behaviors. Another study conducted by Agosta, Graetz, Mastropieri, and Scruggs (2004) implemented a social story intervention focusing on similar results. In this study researchers identified target behaviors (screaming, yelling, crying, and loud humming) and sought to decrease them while increasing appropriate behaviors. Two social stories were introduced to one participating student with autism. However, unlike previous studies, this study supplemented social story reading with a tangible reinforcement system. If the student used the appropriate behaviors included in the social story, then he earned candy. This
reinforcement program was removed during a second intervention phase, but quiet sitting and other positive behaviors continued to increase while screaming decreased (Agosta et al., 2004). The results of social story intervention with this student were positive and provide additional support, though somewhat limited, for future use of social stories with children with autism spectrum disorders.

Kuoch and Mirenda (2003) also designed a social story intervention to reduce the occurrence of problem behaviors in children with autism. Three participants with autism spectrum disorders displayed several target behaviors including aggression, crying, yelling, touching private parts, cheating during game play, and other behaviors deemed socially inappropriate. A social story was written for each individual student to address his behaviors and the social settings in which they occurred. The social stories were read at different times throughout the day and at home or in school depending on the individual student. For example, one of the participating students experienced the intervention at home with his mother, while another student read his social story at meal times in school. The third student's intervention took place in a summer school setting.

While each of the participating students read a social story specific to his target behaviors, only two of the students experienced positive results with regard to behavior reduction. The first of three students had a decrease in problem behavior and was able to generalize sharing behavior in different settings. Another participating student experienced a decrease in problem behavior as well and maintained this decrease following intervention. The decreases in inappropriate behavior for these two students offer support for the effectiveness of social story intervention. However, as with other studies, two of three students experienced a significant change in behavior (Delano & Snell, 2006; Scattone et al., 2006). The third student
continued to display problem behaviors with great frequency and it is unclear whether motivation played a key role or not (Kuoeh & Mirenda, 2003). Regardless, this study further proves that social stories may produce significant changes in the social behavior of children with autism spectrum disorders.

While much of the research related to social story effectiveness has focused on interventions in the school setting, Lorimer, Simpson, Myles, and Ganz (2002) specifically studied the home setting. Researchers addressed decreasing problem behavior in a child with autism, focusing specifically on tantrum behavior. Two social stories were developed as the sole intervention to reduce the precursors to the participating child’s challenging home behaviors. The child studied was read to every morning by his parents, and therapists read the social stories with him as well, encouraging the boy to wait and use a quiet voice for expression. Also, the participating child could request to read either of his social stories at any time throughout the day. With the introduction of this intervention, the child’s tantrums significantly decreased in frequency, as did tantrum warning signs. This social story intervention seemed to be an effective means for reducing socially inappropriate behaviors, such as tantrums (Lorimer, et al., 2002).

As discussed, social stories seem to be effective in increasing social interaction and decreasing socially inappropriate behaviors in children with autism spectrum disorders. Social stories break down specific tasks into steps that are individualized for each child (Barry & Burlew, 2004). Barry and Burlew (2004) studied the effects of a social story intervention on behavior in one type of setting; these researchers focused on the playtime setting. The social story intervention was designed to improve the participation of two children with autism in free-play during the school day. Researchers observed the effects of social stories on duration of appropriate play and defined appropriate play as “interacting with the materials and/or peers at a
given center in ways that same-age peers in a general education classroom would typically exhibit in the same situation” (Barry & Burlew, 2004, p. 47). With intervention, the participating students showed improvement in making choices and playing appropriately with materials and/or peers. One of the students was even moved to a general education classroom as the result of her developed play skills, extending the supportive research base for social story intervention (Barry & Burlew, 2004). This study further demonstrates that social stories may be implemented in a variety of settings and social situations that may pose a challenge to students with autism spectrum disorders.

Current research reviews social stories, examining what they are, how they are used with children with autism spectrum disorders, and how effective they are in producing positive changes in social interaction and behavior. A majority of the case studies reviewed were current, and these studies provide support (though somewhat limited) for the use of social story interventions with children with autism spectrum disorders (e.g. Adams et al., 2004; Barry & Burlew, 2004; Delano & Snell, 2006). Social stories describe a specific social situation that may be challenging to a student with autism and demonstrate appropriate responses to the situation. They also explain how others may react to the child in the given situation (Delano & Snell, 2006). The case studies reviewed focus on improving social interaction and/or engagement, decreasing inappropriate behavior and increasing appropriate behavior, and teaching skills such as play skills to children with autism. The results of previous studies produced many similar results, and the limitations discussed by researchers offer consistency from one study to the next.

According to Delano and Snell (2006), research regarding the effects of social story interventions has a brief history. It was noticed that most of the literature related to this topic has been published in the past few years; the research is current and shows that there is an interest in
this particular intervention. However, many questions remain as to whether or not the evidence supporting social story use is substantial. Future research is needed to examine social story effectiveness for a variety of reasons.

**The Need for Future Research**

Children with autism spectrum disorders of all ages and ability levels attend more inclusive programs. However, much of the research conducted related to the social story intervention involves very young students. For example, Delano and Snell (2006) included students age six through nine in their study, while Kuoch and Mirenda (2003) studied children as young as age three. While it is important to study the effectiveness of social story intervention in the elementary school years, more research with older students needs to take place. Researchers should examine social story use with students of different ages and ability levels (Sørensen & Alper, 2006). Social stories may be effective with a diverse population of students, or they may be more effective with one population of students than another. Scattone et al. (2006) suggest, "the field has not yet identified the population that may benefit best from this intervention for increasing appropriate social skills" (p. 219). Research should implement social story interventions in a variety of settings and with students of varying ages before making this determination.

In addition to examining the effects of social stories with a diverse population of children, future research should investigate the use of social stories in different settings. Many of the studies regarding social story intervention took place in the school setting, but researchers cite the need for research in both home and community settings as well. According to Delano and Snell (2006), "social stories are best developed by people who know the child well, and because they are relatively easy to implement, this intervention may be especially well suited to
family and community settings" (p. 41). Social interaction is essential both in and outside of the classroom setting, and social stories may have different effects under different circumstances. If social stories improve behavior in one setting, their effects in other settings should be examined as well. Generalization of behaviors between settings should be a focus of future investigation (Adams et al., 2004).

Future research related to the effectiveness of social stories for students with autism spectrum disorders should also explore the role of peers in intervention. According to Delano and Snell (2006), peer involvement may benefit students with autism and should be evaluated through upcoming studies. Researchers suggest that data related to social story reading needs to be gathered; for example, reading to a child with autism alone, or reading the story to the child and a typically developing peer (Delano & Snell, 2006). In addition to studying peer involvement in reading, it is important for future research to investigate the effects of children reading their own social story versus being read to by an adult. Do the results of social story intervention vary based on who is doing the actual reading? And also, what effects do visuals have on social story effectiveness when they supplement print? Do children with autism benefit more when pictures are used in addition to words?

As discussed, there are several implications for future research regarding the effectiveness of social story intervention. While age and ability level, setting (home and school), peer involvement, and reading are all important areas for exploration, there are certainly a variety of other factors that must be taken into account. Do social stories produce positive results when used as the sole intervention, or do other factors influence their effectiveness in improving social interaction and behavior? There is much to be explored as the research related to social stories progresses.
**Method**

The purpose of the present study was to examine the use of social stories with children, primarily those with autism spectrum disorders. This study focused on investigating the effects of social story intervention on social interaction and behavior, centering on four areas for improvement: social, behavioral, academic, and communication. The study was designed to collect data regarding school professionals' use of, results, and attitudes related to social story intervention in the classroom setting. To access this information, a survey was created for distribution to special education teachers, teacher aides, speech/language therapists, and behavior therapists working in a separate school setting for students with complex and/or multiple disabilities.

Once the target group for research was identified and permission from the Institutional Review Board (IRB) was received, the surveys were placed in the school mailboxes of selected professionals. The participants were provided with written information about the study. Participation in the research was optional, and through a cover letter, it was explained that survey responses would remain anonymous. Participants were provided with a deadline of one week and placed completed surveys in the school mailbox of the researcher. Thirty surveys were distributed, and of these 30, 19 completed surveys were returned. The rate of return was 63.3 percent. The distributed survey asked participants to provide background information related to job title and education program, and also inquired about their use of and purposes for using social stories in the classroom. Questions related to student population and the effects of using social stories were included on the survey as well. See appendix A for the survey.
Results

Surveys related to social story use, results, and attitudes were distributed to 30 individuals, and of those distributed, 19 were returned. Of the completed surveys, eight (8) were completed by special education teachers, eight (8) by speech/language therapists, one (1) by a behavior therapist, and two (2) by teacher aides. Table 1 shows the population of those professionals who completed and returned social story surveys.

Table 1: Population of those who completed and returned surveys

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Number of Surveys Completed &amp; Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education Teacher</td>
<td>8</td>
</tr>
<tr>
<td>Speech/Language Therapist</td>
<td>8</td>
</tr>
<tr>
<td>Behavior Therapist</td>
<td>1</td>
</tr>
<tr>
<td>Teacher Aide</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

In addition to providing their job title, survey participants were asked to check the program(s) they currently work in. The programs listed were preschool, SHAPE, and REACH. Those working in the preschool program are responsible for working with three to five year olds, while those working in the other two programs work with the school age population. SHAPE (Staff Helping Active Students Excel) students are those with significant behavior challenges, while REACH (Reaching Each Ability Children Have) students are those with complex physical and cognitive disabilities. Table 2 shows the programs of all survey respondents.

Table 2: School programs of survey respondents

<table>
<thead>
<tr>
<th>School Program</th>
<th>Number of Those Working in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>6</td>
</tr>
<tr>
<td>SHAPE</td>
<td>14</td>
</tr>
<tr>
<td>REACH</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 2 represents the school programs of all survey respondents (special education teachers, speech/language therapists, behavior therapists, and teacher aides) combined. While 19 participants completed and returned social story surveys, the total of those working in different school programs is higher (26) because some professionals may work in two or more programs. The following tables show the school programs worked in, broken down by job title.

Table 3: School programs of special education teachers surveyed

<table>
<thead>
<tr>
<th>School Program</th>
<th>Number of Those Working in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>0</td>
</tr>
<tr>
<td>SHAPE</td>
<td>5</td>
</tr>
<tr>
<td>REACH</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 4: School programs of speech/language therapists surveyed

<table>
<thead>
<tr>
<th>School Program</th>
<th>Number of Those Working in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>5</td>
</tr>
<tr>
<td>SHAPE</td>
<td>6</td>
</tr>
<tr>
<td>REACH</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 5: School programs of behavior therapists surveyed

<table>
<thead>
<tr>
<th>School Program</th>
<th>Number of Those Working in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>1</td>
</tr>
<tr>
<td>SHAPE</td>
<td>1</td>
</tr>
<tr>
<td>REACH</td>
<td>0</td>
</tr>
</tbody>
</table>

Both speech/language therapists and behavior therapists may work in more than one program during the same school year. Although only one behavior therapist completed and returned the social story survey, he or she works in two different programs.
Table 6: School programs of teacher aides surveyed

<table>
<thead>
<tr>
<th>School Program</th>
<th>Number of Those Working in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>0</td>
</tr>
<tr>
<td>SHAPE</td>
<td>2</td>
</tr>
<tr>
<td>REACH</td>
<td>0</td>
</tr>
</tbody>
</table>

Of the 19 survey respondents, 17 indicated that they have used or are currently using a social story intervention with any of their students. The following table shows the number of those who have used or are currently using social stories, broken down by job title.

Table 7: Survey respondents who have used or are currently using social stories

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Number of Those Who Have Used or are Currently Using Social Stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education Teacher</td>
<td>7</td>
</tr>
<tr>
<td>Speech/Language Therapist</td>
<td>7</td>
</tr>
<tr>
<td>Behavior Therapist</td>
<td>1</td>
</tr>
<tr>
<td>Teacher Aide</td>
<td>2</td>
</tr>
</tbody>
</table>

The present study reveals that social stories are a current method used with students with complex and/or multiple disabilities; 89.5 percent of those surveyed indicated that they have experience with social stories. Survey participants were also asked to indicate their purpose(s) for using social stories with their students, and were provided with a list of purposes to choose from. Purposes included change in routine, following routine(s), dealing with emotions, personal grooming/hygiene, behavior change, increase social interaction, calming, transition to new class/school, and major life event. An additional “other” purpose was also included for participants to list a different purpose for using social stories. Table 8 summarizes the purposes
for social story use shared by participants in the study. Participants were told to check as many purposes as applied, so many indicated multiple purposes.

Table 8: Purpose(s) of using a social story

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Number of Those Using for this Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in routine</td>
<td>5</td>
</tr>
<tr>
<td>Following routine(s)</td>
<td>8</td>
</tr>
<tr>
<td>Dealing with emotions</td>
<td>8</td>
</tr>
<tr>
<td>Personal grooming/hygiene</td>
<td>9</td>
</tr>
<tr>
<td>Behavior change</td>
<td>5</td>
</tr>
<tr>
<td>Increase social interaction</td>
<td>4</td>
</tr>
<tr>
<td>Calming</td>
<td>7</td>
</tr>
<tr>
<td>Transition to new class/school</td>
<td>3</td>
</tr>
<tr>
<td>Major life event</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
</tbody>
</table>

Of those listed the most popular purpose for social story use was personal grooming/hygiene. Nine participants indicated that they used social stories for this purpose. Several participants commented on their specific purpose(s) related to producing a change in personal grooming/hygiene. These purposes included decreasing anxiety/fear of fingernail and haircutting, hand washing, toilet training, and a general fear of using the toilet. The second most popular purposes for using social stories were following routine(s) and dealing with emotions. Both purposes were identified by eight participants. One special education teacher indicated that he or she used a social story to help a student anticipate change and gave examples of appropriate responses to changes. Two teachers used a social story for following routine, particularly with riding the bus to and from school, while another used a social story that focused specifically on field trip routine. Eight participants indicated that they used a social story for dealing with emotions. Specific focuses included addressing anger and appropriate ways to deal
with anger, decreasing anxiety about being alone, decreasing anxiety about working in large group settings (perseveration), and identification of different emotions.

Of those participants who have experience with social stories, 41.2 percent shared calming as a purpose. One participant mentioned that a former student used a social story before working in large group settings due to intense perseverations and behaviors, such as aggressing toward others. The social story was used with the goal of calming the student and decreasing the occurrence of anxiety attacks. One participant used a social story to address self-calming techniques, while another participant’s purpose was to teach a student to calm after tantrums. Additional purposes and goals of social story use may be found in table 9.

Table 9: Other purposes and specific goals of social story use

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Specific Goal(s) of Use for this Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in routine</td>
<td>• Make shopping trips part of routine</td>
</tr>
<tr>
<td>Behavior change</td>
<td>• Decrease perseverations and aggression toward others</td>
</tr>
<tr>
<td></td>
<td>• Decrease hitting, pushing, and throwing</td>
</tr>
<tr>
<td></td>
<td>• Teach stranger danger</td>
</tr>
<tr>
<td>Increase social interaction</td>
<td>• Appropriate response</td>
</tr>
<tr>
<td></td>
<td>• Use appropriate voice/volume</td>
</tr>
<tr>
<td></td>
<td>• Being a good friend</td>
</tr>
<tr>
<td>Transition to new class/school</td>
<td>• Assure student of safety and comfort</td>
</tr>
<tr>
<td>Major life event</td>
<td>• Ease fear of move to new home</td>
</tr>
<tr>
<td>Other</td>
<td>• Increase variety of foods at mealtimes</td>
</tr>
<tr>
<td></td>
<td>• PICA: decrease mouthing of nonfood items</td>
</tr>
<tr>
<td></td>
<td>• Using a louder voice</td>
</tr>
</tbody>
</table>

In addition to asking participants to identify their purpose(s) for using social stories, the distributed survey also asked them to identify the population of students they have found social stories most useful with. The responses to this question varied, but several participants responded with specific disability categories. For example, seven participants specifically stated
that they have found social stories most useful with students with autism spectrum disorders (41.2 percent). Two of 17 participants who have used or are currently using social stories (11.8 percent) stated they have found social stories useful with students with anxiety disorders and/or obsessive compulsive disorder. Others shared populations of students including those with traumatic brain injury, pervasive developmental disorder, central auditory processing delays, cognitive deficits, and mental retardation.

While several participants stated they have found social stories most useful with students with specific disabilities, others described students they have taught or are currently teaching. One special education teacher stated that he or she has had some success if a student exhibits greater behavioral challenges, while another stated that he or she found them useful with students who are uneasy about something. Another special education teacher has found social stories useful with higher functioning children and those who are socially/visually aware. One of the speech/language therapists surveyed shared that he or she has found social stories useful with all students, including those in both general and special education. While the majority of participants offered responses to the population question, others did not respond due to a lack of experience with social stories.

The final question on the distributed survey asked participants to describe the effects they have noticed as a result of using social stories. Four categories were listed for response, including social, behavioral, academic, and communication effects. While the majority of participants described effects in more than one area, three participants focused solely on the behavioral effects of social stories. Two of these three participants stated that they found social stories effective; one participant stated that a social story helped a student to calm during difficult tasks, while another stated that a social story helped to limit behaviors. The social story
helped his or her student stop, think, and make the right choice. However, the third participant to focus on behavioral effects stated that the effects of social stories were limited and that they seem to benefit higher functioning students more. Other participants responded with effects such as decreased inappropriate behavior (physical aggression and/or tantrum behavior) and increased appropriate behavior.

Of those surveyed, approximately 76.5 percent of participants with social story experience noted social effects. Several participants noted that social interaction became more appropriate as the result of using social stories. For example, participants stated that social interaction increased, eye contact improved, and students experienced increased commonality among peers. In addition, several participants stated that social stories produced a decrease in anxiety for students. One participant noted that his or her student was more willing to work with various staff members in the classroom, while another student experienced less anxiety associated with changes in routine. Also in the area of social interaction, one participant shared that his or her student began to use a clearer/louder voice as a result of social story intervention. Participants noted several positive effects in the social area, while only 29.4 percent of those using social stories noticed positive effects in the area of academics.

Two of five participants who noticed academic effects stated that students’ attention improved with the use of a social story intervention. One participant stated that attention was better because anxiety was reduced, while the other stated that his or her student was able to focus on the task at hand rather than on those around her. Another participant shared that his or her student participated in activities more and showed an increased interest in written language as the result of using a social story. Interestingly, one speech/language therapist noticed that his or her student learned the progression of left to right for prereading as the result of reading his or
her social story. The student was able to use pictures to assist with "reading" the text. And finally, one participant stated that success at the targeted area equals success academically.

In the fourth area, communication, participants noticed several positive effects. For example, two participants noted effects related to language. One participant stated that his or her student was able to comply with pragmatics/social rules of language, while the other noticed improvement with grammar skills and the identification of emotions. Another positive effect noticed was increased communication between the student and staff, particularly about issues the student was dealing with. Finally, one participant saw improvement in the use of his or her student's communication device (Big Mac/head switch). Participants found the results promising.

In addition to responding to all questions on the distributed survey, two participants shared additional comments related to social story use. One shared that social stories can be useful tools when administered with the "right" students, while another shared further details related to his or her experience with social stories. This participant was very open and shared that he or she did not see any significant, positive changes in behavior for a student with anxiety related to hygiene tasks. The participant shared that the social story did not seem to relieve his or her student's anxiety. The participant also shared that when used for anger purposes, a social story did not produce significant changes in behavior. However, a social story did assist one student in calming after a behavior episode.

**Discussion**

A large percentage of survey respondents (89.5 percent) have used or are currently using social stories with their students. This percentage shows that social stories are a current method used with students with complex and/or multiple disabilities. It was interesting to see that many
participants (41.2 percent) agreed that social stories were most useful with students with autism spectrum disorders since much of the current literature is focused on this particular group of students. While social stories are often used with students with autism spectrum disorders, the current research project shows that social stories can be successful with other groups of students (e.g. students with anxiety disorders, obsessive compulsive disorder, traumatic brain injury, pervasive developmental disorder, central auditory processing delays, cognitive deficits, and mental retardation). Though much of the literature related to social stories focuses on social interaction and/or behavior effects, participants in the current study used social stories for different purposes. Only 23.5 percent of participants with social story experience used this intervention to increase social interaction, while over half (52.9 percent) used social stories for personal grooming/hygiene purposes. This demonstrates that social stories may be introduced to students for a variety of purposes and to produce changes in multiple areas.

Participants noted a variety of effects as the result of social story use, and it was interesting to see that many participants noticed similar effects. For example, several participants noted that social stories helped decrease the occurrence of inappropriate behaviors and/or increase the occurrence of appropriate behaviors. Also, several participants shared that social interaction became more appropriate as the result of social story use. However, what does “appropriate” social interaction look like? Do social stories produce different results in students who are verbal and students who are nonverbal, and are their results influenced by other factors? Several participants shared that effects in different areas were related (e.g. academic and communication); however, this relationship was not fully described. Do positive effects in one area lead to positive effects in other areas?
Though only 19 school professionals completed the social story survey and 17 have used social stories, the results still seem promising, though limited. While the majority of participants were able to share positive effects related to social story use, several indicated that their effects were limited or that they did not have enough experience to comment. This finding seems consistent with the current literature related to the effects of social stories on the social interaction and behavior of students with autism spectrum disorders. Though research in this area is limited, the noted effects influence the need for future research and implementation of social story interventions.

Conclusion

The current project sought to examine the use of social stories with children with autism spectrum disorders, focusing on the effects on social interaction and behavior. The literature reviewed was somewhat limited, but did reveal potential benefits. As indicated by current literature and the present study, future research is needed to examine the effects of social stories on children of varying ages and ability levels. Future research should also examine the impact of social stories on the social interaction and behavior of students identified as having different disabilities. While the current project examined social story use with children with autism spectrum disorders, the results of the distributed survey revealed that there are potential benefits to children with other disabilities as well as to typically developing students. The findings are important because they show promise and indicate that effects may be positive when social stories are used with the “right” type of student. The population of students that may benefit most from social story intervention has yet to be identified, and this calls for additional research and examination of social story development and use.
References


Appendix A

Social Story Survey

Please complete the following survey. Responses will remain anonymous.

Background Information: Please check one or more

Job Title: _____ Special Education Teacher
_____ Speech/Language Therapist
_____ Behavior Therapist
_____ Teacher Aide
_____ Other _______________________

Program(s): _____ Preschool
_____ SHAPE
_____ REACH

Please respond to the following:

Have you used or are you currently using a social story with any of your students?

Purpose of using social story: Please check as many as apply

_____ Change in routine
_____ Following routine(s)
_____ Dealing with emotions
_____ Personal grooming/hygiene
_____ Behavior change

_____ Increase social interaction
_____ Calming
_____ Transition to new class/school
_____ Major life event
_____ Other _______________________
Please comment on your purpose(s)

What population of students have you found social stories useful with?

What effects have you noticed as a result of using social stories?

   Social:

   Behavioral:

   Academic:

   Communication:

________________________________________

Additional comments: