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SOCIAL STORIES: A USER-FRIENDLY INTERVENTION?

A Thesis by

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Bachelor of Liberal Arts, Wichita State University, 2004

Submitted to the Department of Counseling, Educational and School Psychology  
and the faculty of the Graduate School of  
Wichita State University  
in partial fulfillment of  
the requirements for the degree of  
Master of Education

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## SOCIAL STORIES: A USER-FRIENDLY INTERVENTION?

The following faculty members have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirement of Master of Education with a major in Educational Psychology.

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Nancy McKellar, Committee Chair

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Linda Bakken, Committee Member

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Kathy Stratman, Committee Member

## DEDICATION

To my husband, Cody, to our three sons, Cory, Conner, and Caleb, to my brother, Jonathan, and to all my parents.

You have got to keep autistic children engaged with the world. You cannot let them tune out.  
-Temple Grandin

## ACKNOWLEDGMENTS

I would like to thank my husband and children for their continuous support throughout this process; my advisor, Nancy McKellar, who inspired the Social Stories™ topic and also immeasurably gave so much of her time to support me through this endeavor; Jill Terhune, who helped me code (and even recode when necessary) all the stories and lent not only a huge amount of time and effort but remained a true and supportive friend throughout; Carol Gray, who gave me permission to use her wonderful materials; and finally, to the many friends I've made in the CESP department—you've always been so nice and helpful! To all of you, my appreciation runs deeply, always.

## ABSTRACT

Autism Spectrum Disorders (ASDs) are a group of neurodevelopmental disorders involving impairments in social interaction, language and communication, and restricted, repetitive, and stereotyped behaviors (National Institute of Mental Health [NIMH], 2007; Steurnagel, 2005). Deficits in social skills can hinder learning progression and sociability. Social stories are used to teach social skills about a particular event and provide information for better understanding of the expected or appropriate responses within specific situations (Autism Education Network, 2006). They are a means of providing cues, usually visual in nature, for children with ASDs to give meaning and accurate depictions of social contexts and how best to *be* or *maneuver* in a variety of situations. Gray (2000a, 2000b, 2004) has systematized her version of Social Stories™ and provided definitive guidelines for writing Social Stories™ in her publications, videos, and seminars. The extent to which Social Stories™ are user friendly was examined in this research. Fifteen parents and professional educators read a condensed version of Gray's (2004) guidelines and then wrote a social story for a boy named Zac. Participants then received more extensive training from a power point presentation narrated by the researcher. Finally, participants wrote a second social story for a boy named Jon. Participants demonstrated some knowledge of the components of social stories after only reading the condensed version. Overall demonstration of Social Story™ writing skills showed lack of knowledge of sentence types and usage, especially of directive statements. After the additional training, participants demonstrated increased knowledge and skill of the major aspects of writing Social Stories™ (e.g., different sentence types and usage, including an appropriate title, and language components).

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## LIST OF ABBREVIATIONS/NOMENCLATURE

ASD	Autism Spectrum Disorder
PDD	Pervasive Developmental Disorder
AD	Autistic Disorder
CDD	Child Disintegrative Disorder
PDD-NOS	Pervasive Developmental Disorder-Not Otherwise Specified
NIMH	National Institute for Mental Health
APA	American Psychiatric Association
ToM	Theory of Mind
Social Stories™	Gray's materials and guidelines are trademarked
social stories	social scripts that do not necessarily follow Gray's guidelines

## CHAPTER I

### THE PROBLEM

Social interaction and communication are challenging tasks for individuals with Autism Spectrum Disorders (ASDs), their families, and educators. Social Stories™, which cue individuals with scripts for socially acceptable interactions, have been shown to be effective for children with ASDs in home, community, and school settings (Gray & Garand, 1993). Systematized by Gray, Social Stories™ follow definitive guidelines; this means there are specific points individuals must learn before writing a Social Story™ accurately. One important aspect is the rationale supporting their use with children with ASDs: supplying information that the child may be missing. Gray and her co-workers from the Gray Center located in Grand Rapids, Michigan, travel the world to provide seminars in correctly gathering information, authoring, and implementing Social Stories™.

Typically developing infants can discern when they and another person are both attending to the same object or event (Baron-Cohen, 1995). They are able to *read* the actions of people and see those actions as goal-directed or desire-driven. Typically developing toddlers have the ability to make-believe, imagine, and understand pretense. When children are of school age, they are able to figure out what others may know, their thoughts, and beliefs. Children with an ASD, however, usually do not develop in these typical ways, and may lack these skills.

#### *What Are Autism Spectrum Disorders?*

ASDs, also referred to as Pervasive Developmental Disorders (PDDs) (American Psychiatric Association [APA], 2000), are characterized by differing levels of impairment in the areas of language and communication, social interaction, and restricted, repetitive, and stereotyped behaviors (National Institute of Mental Health [NIMH], 2007). In children, these

disorders often present as deficits in comprehending and effective usage of social skills in interacting and communicating with others (Adams, Gouvousis, VanLue, & Waldron, 2004). ASDs include Asperger's Disorder, Autism, Childhood Disintegrative Disorder (CDD), Rett's Disorder, and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS). The following descriptions of the five ASDs are taken from the *Diagnostic and Statistical Manual of Mental Disorders-IV-TR* (APA, 2000).

Asperger's Disorder is usually diagnosed if the child has at least two of the following: (a) marked impairment in eye gaze, facial expression, body postures, and gestures which act as a means to self-regulate in social interactions; (b) failure to develop appropriate peer relationships; (c) lack of spontaneity to seek or share in the enjoyment, interests, or achievements of others; and (d) lack of social or emotional reciprocity. A diagnosis of AS also requires restricted, repetitive, and stereotyped patterns of behavior, interests, and activities. Individuals with AS demonstrate significant impairment in social, occupational, or other important areas of functioning, but do not have delays in language or cognitive development.

Autism, or Autistic Disorder, has similar diagnostic criteria as AS; however, there is also a marked delay in spoken language, or if the individual does have adequate speech, there are impairments in initiating or sustaining conversations, stereotyped and repetitive language, or idiosyncratic use of language. There is also a lack of varied, spontaneous pretend or imitative play. Autistic Disorder is similar to AS in that there are restricted, repetitive, and stereotyped patterns of behavior. A child with Autistic Disorder can be inflexible in adherence to nonfunctional routines or rituals. Motor mannerisms may include unusual behaviors (e.g., hand flapping), and/or a preoccupation with object parts (e.g., watching wheels roll). For Autism, the

onset of delays or abnormal functioning should occur by age 3, in the areas of social interaction, language in social communication, or symbolic or imaginative play.

Childhood Disintegrative Disorder (CDD) is characterized by normal development for the first 2 years of life coupled with the loss of previously acquired skills before the age of 10 in at least two of the following: expressive or receptive language, social skills or adaptive behavior, bowel or bladder control, play, and motor skills. CDD diagnosis requires functional abnormalities in at least two of the following three categories: social interaction impairment; communication impairments; and restricted, repetitive, and stereotyped patterns of behavior, interests, and activities, including stereotypical behaviors in motor skills and mannerisms. All three categories are similar to those in Asperger's Disorder and Autism.

A diagnosis of Rett's Disorder, which occurs only in females, requires apparently normal prenatal and perinatal development, normal psychomotor development through the first 5 months after birth, and normal head circumference. The onset of all the following occurs after the period of normal development: deceleration of head growth between ages 5 and 48 months, loss of previously acquired purposeful hand skills between the ages of 5 and 30 months with the subsequent development of stereotypical hand movements, loss of social engagement early on (although social interaction often develops later), poor coordination, and severely impaired expressive and receptive language development with severe psychomotor delay.

PDD-NOS is a diagnosis used when there is severe and pervasive impairment in the development of reciprocal social interaction associated with impairment in either verbal or nonverbal communication skills or with the presence of stereotyped behavior, interests, and activities, but the criteria are not met for a specific ASD, Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder. This category includes "Atypical Autism" which

presents in ways that do not meet the criteria for Autism because of onset after age 3, atypical symptomatology, subthreshold symptomatology, or all of these.

### *Deficits in Communication Skills*

Norris and Datillo (1999) reported that if children with ASDs have verbal skills and have average to above average intelligence, they still may have difficulties comprehending or empathizing with the thoughts and feelings of others, often resulting in problems with forming relationships. According to the *Diagnostic and Statistical Manual of Mental Disorders-IV-TR* (APA, 2000), individuals with an ASD may exhibit social isolation, have a preference for being or playing alone, and behave inappropriately while in social situations. For example, aggression toward or withdrawal from others may occur as a coping mechanism (Adams et al., 2004). It can be difficult to understand what children with an ASD are trying to communicate and their body language is also challenging to interpret (e.g., self-injurious behaviors). Children with ASD also often lack eye contact and fail to understand social cues such as body language, gestures, and facial expressions of others (Adams et al., 2004). Odd facial expressions, gesturing, and other seemingly peculiar movements often do not match what they are saying and their tone of voice often fails to convey what they are feeling. Being misunderstood can cause the child with an ASD to become frustrated and as a result respond with inappropriate behaviors (e.g., screaming or grabbing). Children with ASDs need to be taught more appropriate ways to express their needs (Adams et al., 2004; NIMH, 2007).

Many persons with ASDs exhibit strengths in visual-perceptual skills (Thiemann & Goldstein, 2001). Visual information is efficiently processed and more meaningful than auditory information (Quill, 1997), resulting in more successful overall task completion. Treatment strategies that incorporate visual strengths may positively impact individuals' weaknesses in

social communication. Social stories are one such intervention that uses visually coded information.

### *Theory of Mind*

Baron-Cohen (1995) proposed that children with ASDs lack *theory of mind* (ToM), meaning that they lack understanding of others as having their own personal thoughts, feelings, plans, and points of view (Schultz & Anderson, 2003). In fact, some researchers posit that their poor communication skills are due to these kinds of deficits (Huang & Wheeler, 2006). Children with ASDs are slow to learn to interpret the thoughts and feelings of others, consistent with proposed ToM deficits in the ability to comprehend what others are thinking, feeling, and meaning (Edelson, 1995). Keane (2004) included imagination and emotions to the list of social impairments. Subtle social cues (e.g., smiles, winks, frowns) may have little or no meaning to individuals with ASDs. To interact successfully, it is imperative to be able to *read* what is happening within social situations (Delano & Snell, 2006; Gray & Garand, 1993) and to understand that others have their own points of view as well as their own plans and thoughts (Edelson, 1995). Children with ASDs often do not understand the mental states, intentions, needs or desires of others (Herrey, Capps, Keltner, & Kring, 2005; Reynhout & Carter, 2006). A child who is asked to "Come here," would not differentiate in his or her interpretation of the meaning of the request based on social cues. It does not matter if the person speaking is warm and friendly or frowning; the individual with an ASD has limited or no understanding of gestures or facial expressions.

### *Social Impairments*

Gray (2000b) explained the social impairment of ASDs as being shared; that is, it takes at least two people to have a social interaction. Children whose social world is limited by ToM

deficits may feel bewildered and easily overwhelmed. They are usually unable to see another person's perspective or to predict or comprehend the actions of others (NIMH, 2003). Tools for instructing children with ASDs about socially appropriate behaviors benefit not only these children but all people with whom they interact. For instance, once appropriate behaviors are learned, the child, as well as accompanying family members, peers, or other adults, will move more smoothly through the activity or situation, making the experience more successful and enjoyable. The lives of family members can be substantially improved when the behaviors that disrupt regular routines are reduced. This changes the dynamics of family interactions from having to *deal* with the behavior on a recurring basis to feelings of peace and enjoyment of each other's company, which in turn increases the likelihood for positive family interactions (Sansoti, Powell-Smith, & Kincaid, 2004).

There are seemingly endless situations in which children with ASDs are missing out on what is occurring within a social context or situation. There are many components involved in socialization; this presents children with ASDs some degree of confusion or lack of involvement in peer relations. They may have difficulty in correctly identifying behaviors as inappropriate and explaining why those social behaviors are inappropriate. Some social deficits may stem from their lacking knowledge about what is normal in certain social settings, and therefore, they may not be able to differentiate or understand the social dialogue (Herrey et al., 2005).

#### *Rationale and Purpose of Current Study*

Parents and practitioners need to understand the importance of structure and routine as vital components in the learning environments of children with ASDs. Keane (2004), in a review of the literature, found that "the provision of structure is an element commonly related to successful learning outcomes across a range of programs for children with ASDs" (Implications

for Practice Section, ¶ 3). Keane indicates that it is now widely believed that a structured environment provides the best learning setting for individuals with autism. Rereading Social Stories™ periodically is one way to provide necessary structure.

Parents and practitioners strive for positive outcomes. Studies with social stories reveal positive results. Current special education legislation advocates the least intrusive intervention that effectively changes behavior. It has been speculated that the reasons for the success of social stories include being convenient and unobtrusive and that they may draw upon strengths exhibited by some children with ASDs: adherence to rules and/or routines (Scattone, Wilcynski, Edwards, & Rabian, 2002).

The Gray Center, which Carol Gray founded in 1999, offers several different materials about how to write Social Stories™. She and others at the Gray Center offer fee-based seminars at which attendees learn the rationale behind Social Stories™, their use with individuals with ASDs, and how to author them. According to Howley and Arnold (2005), there is a misconception that Social Stories™ are easily written. Depending on the needs of the individual with an ASD, the situation or event, and the individual authoring the story (e.g., parent or education professional), the process may be time-consuming, requiring a lot of information gathering and rewriting. Howley and Arnold point out that, “Training in use of the approach is essential” (p. 28).

The purpose of this study is to evaluate whether parents and practitioners can, after reviewing Gray’s materials about social story rationale and composition, correctly author their own original social stories according to Gray’s guidelines, to determine whether they improve after further instruction, and to obtain their opinions of Social Stories™.

The following sections consist of the literature review, method, results, and discussion. The literature review discusses the purpose and rationale of the current study by sharing information about familial issues, social stories as an intervention, the writing process, and the use of social stories. Participants were all female, and were either parents of a child with an ASD or an educational professional with experience with children with ASDs. The materials used in this study are discussed at length and consist of modified versions of Gray's materials. Results and discussion of the study follow.

## CHAPTER II

### PURPOSE AND RATIONALE OF CURRENT STUDY

The following section consists of the literature review concerning ASDs and social stories. One important aspect addressed at length is the impact on the family. The rationale for social stories, why they are useful with individuals with ASDs, and theory of mind (ToM) are discussed. Many uses of social stories were reported from various sources of research.

#### *Effects on the Family*

ASD are the fastest-growing developmental disability (Autism Society of America [ASA], 2006). Currently, 1 in 150 eight-year-old children in many different areas of the United States have an ASD (CDC, 2007). Caron and Hutton (2005) reported from parent interviews that having a child with an ASD can put considerable strains on parents and other members of the family. Many have expressed that their personal experiences as parents to a child with an ASD were stress-filled.

Stress also stems from necessary family schedule adaptations and the need for structure in their home settings. There are reports of the necessitation of planning ahead for even simple trips, coupled with no time for relaxation, fun or family vacations. Other reports include marital strife, concerns for safety, and the fear of injury to others or to the children themselves.

There can be many instances when a parent or family feels stressed and uncomfortable due to behaviors exhibited by the family member with an ASD. Mancil, Conroy, Nakao, and Alter (2006) report that many parents experience stress when their child has a tantrum. It is unfortunate that, compared to parents with non-disabled children, those who parent children with ASDs cannot, much of the time, ascertain why their child is engaging in tantrum behavior, due to the child's communication deficits.

### *Parent Involvement*

Symon (2005) reported that parent education programs expand the availability and quality of services. When parents and other family members have been included, they were recognized as positively affecting the intervention by increasing the amount and accessibility of interventions as well as providing more and varied opportunities for rehearsal. Parents have learned to implement as well as design communication, social, and behavioral programs for their children. Parents have successfully implemented interventions that have reduced aberrant behaviors, positively recognized children when they behaved appropriately, improved skills in both verbal and nonverbal communication, increased desired play skills, and provided learning within daily routines.

Parents have been trained in the uses of naturalistic interventions, social-communication skills during daily activities/routines, and social stories with their children with ASDs (Ingersoll & Dvortcsak, 2006; Kuoch & Mirenda, 2003; Lorimer, Simpson, Myles, & Ganz, 2002). These studies have used various outcome measures (i.e., parent-satisfaction survey, post-intervention anecdotal parent-report, ABAB design) to demonstrate that the parent-child relationship has improved and the children continued to make gains in acquiring and maintaining targeted skills. Changes include improved communication skills, reduced inappropriate behaviors, and generalization and maintenance of skills. Parent education, training, and involvement in the child's intervention can also have implications for reducing the stress often experienced by parents and improving the lives of all family members (e.g., increasing time spent in recreation and leisure). Ingersoll and Dvortcsak (2006) reported that parents were enthusiastic about the program and felt that the intervention they employed (i.e., an early childhood special education curriculum to be used in school and at home) added to their children's education.

Parents can be an integral part of their child's success and they may have specific goals in mind for their child. Teaching parents to be "effective change agents" is important for them to be successful when they work with their child. Delano and Snell (2006) reported that social stories are often developed best by those who are most familiar with the child; they are implemented relatively easily and parents and caregivers may feel this intervention is complementary to individual social situations of families and in community settings. Personal goals and individual needs can be addressed with social stories.

Interventions may be more effective and generalizable when parents, teachers, and the child's peers all become involved. Bauminger (2002) conducted a study involving an intervention in which parents, teachers, and peers (i.e., the child's *close social agents*) actively participated in carrying out the intervention and worked collaboratively to enhance social competence of the children. The child participants improved in all three areas the intervention addressed: social cognition/social problem-solving, emotion understanding, and social interaction.

Parents may have difficulty in tracking their child's progress when they implement an intervention in a home or community setting. Sansoti and Powell-Smith (2006) conducted a study in which parents were responsible for implementing the social stories. They related a potential limitation to the use of untrained parents to implement the intervention, namely, that the parent may not adhere to the treatment protocol. In this study, the children read their stories at home with their parents. Monitoring how the social stories were implemented was not possible. Parents and other caregivers were given a copy of their respective social stories and instructed at what times to review the stories with their child (e.g., before going to and returning from school). Parents and caregivers were not trained in the writing or implementation of social stories; instead

stories were developed by the researchers. The authors had parents keep journals to record when and how often they read social stories with their children. Researchers monitored the intervention by observing behaviors of the children, but they were not told when use of the social story began. Two of the three participants demonstrated increases in social engagement. The third participant's data were highly variable and, the authors noted, should be interpreted with caution. The two participants whose social behaviors improved, read their social stories at designated times with their caregivers; journal entries indicated no significant difficulties. The third participant's journal, for unknown reasons, was incomplete. When his caregivers were interviewed, they reported no known difficulties with their child's reading of the social story.

### *Social Stories as an Intervention*

Social Stories™ were developed in 1991 by Gray and are used to teach social skills about a particular event and provide information about the expected or appropriate responses within those conditions (Autism Education Network, 2006). ToM is closely related to social cognition in that ToM helps describe what aspects of social situations people with ASDs do not understand (Kuoch & Mirenda, 2003). Kuoch and Mirenda state, “A lack of theory of mind, the ability to infer what other people think and feel, has been proposed to account for the social impairments experienced by people with autism” (p. 219). Social stories as an intervention are meant to fill in the gaps by providing individuals with ASDs with the missing information in social contexts and what others' expectations are in those contexts. Kuoch and Mirenda suggest that social stories should help individuals with ASDs to foster understanding in interpersonal situations and provide cues in demonstrating appropriate behaviors.

Children with ASDs are better able to express appropriate behaviors when in new or difficult situations or transitions into different situations after being introduced to social stories

(Gray & Garand, 1993). According to Rust and Smith (2006), social stories are intended to aid children with ASDs in managing their behavior themselves by unambiguously depicting what is expected in certain situations and when, how, and why events happen as they should. Social stories address deficits in social cognition, which Gray and Garand (1993) describe as “the cognitive skills required for social interaction” (p. 1).

The research literature on writing Social Stories™ is scarce. One study (Quilty, 2007) evaluated whether paraprofessionals could accurately write and implement Social Stories™. The researcher trained the paraprofessionals by showing them portions of Gray’s video materials in two separate sessions. While writing, the paraprofessionals were able to share ideas and assist each other. Paraprofessionals’ stories were evaluated by a speech-language pathologist graduate student with Social Stories™ experience. The graduate student read each story to determine whether it contained the following: (a) a title; (b) introduction, body, and conclusion statements; (c) answers to applicable *wh*—questions; (d) positive and flexible language; and (e) a greater proportion of descriptive than directive statements. In addition, the autism resource teacher read each of the Social Stories™ to ensure that each story was appropriate regarding student’s abilities. It was determined that all stories met the criteria.

The stories are applicable in a variety of settings that include the child’s home and community. Social stories were originally composed for children with high-functioning Autism (Gray & Garand, 1993), but have also been shown to be successful in children with various other ASDs. Social stories have generally been associated with the most success when used with individuals who function intellectually in the ‘trainable mentally impaired’ range (i.e., an IQ in the range of 30-55) or higher and who have basic expressive and receptive language skills (Gray & Garand, 1993; Prizant, Schuler, Wetherby, & Rydell, 1997; Reynhout & Carter, 2006).

Scattone, Wilcynski, Edwards, and Rabian (2002) postulated that children with ASDs have unique qualities upon which social stories may draw. They specifically mention rigidly adhering to routines. Social stories may function to institute routines or rules that children with ASDs can apply in social contexts. Scattone and her colleagues go on to mention that social stories may be considered less invasive as compared to other interventions that address social skills deficits, such as discrete trial instruction, pivotal response training, and functional equivalence training, because stories change or evolve according to child's needs and do not take long to administer.

Delano and Snell's (2006) research demonstrated that the family is dramatically affected by the ability of the child with an ASD to participate in the community and relate to others, underscoring the need for research that addresses social functioning in environments besides school. Parents have reported that social stories have helped children and their families enjoy social settings better since they have been shown to improve social interactions, including picking up a sibling from school (Gray & Garand, 1993), decreasing tantrums (Kuttler, Myles, & Carlson, 1998; Lorimer, Simpson, Myles, & Ganz, 2002), and decreasing inappropriate vocalizations (Norris & Dattilo, 1999). Social stories are usually developed by those who know the child well (e. g., parents and teachers) and can be easily implemented, making them suitable for family and community settings (Delano & Snell, 2006).

#### *Social Story Sentence Types and Proportions*

Social stories should be understood easily by the child with an ASD. They should include vocabulary and presentation forms that are appropriate for the individual's age, abilities, and comprehension levels (Reynhout & Carter, 2006; Rowe, 1999).

Social stories are composed of six sentence types (see Table 1). The most commonly employed are descriptive, perspective, affirmative, and directive (Gray, 2000b). Two other types of sentences less commonly used are cooperative and control sentences.

TABLE 1  
EXAMPLES OF SOCIAL STORY SENTENCE TYPES

Sentence	Example
Descriptive	<b>On most days, I</b> ride the bus.
Perspective	<b>The bus driver will like it</b> if I stay in my seat.
Affirmative	People stay in their seats on the bus <b>to stay safe</b> .
Directive	<b>I will try to</b> stay in my seat.
Cooperative	<b>The bus driver will help me</b> to stay safe on the bus.
Control	When the bus driver asks me to sit down, she wants me to be safe.

*Note.* Parts of sentences in bold depict the parts of speech that are particular to that sentence type.

Descriptive sentences give details about the environment or social and behavioral cues (Barry & Burlew, 2004). These answer the *wh* questions, such as when, what, where, and who. They tell what is happening or what will happen, why it is happening, and who is involved in the situation (Gray, 2000b; Ivey, Heflin, & Alberto, 2004). For example, “My name is Ariel. I usually ride the bus to school.”

Perspective sentences give descriptions of reactions and responses of others regarding the target context. They may also provide the reasons for the given responses and/or give descriptions of how others feel (Rowe, 1999). Perspective sentences are most often used to understand the moods, feelings, and reactions of others (Gray, 2000b; Ivey et al., 2004). For example, “The teacher will like it if I’m listening to her” or “Lots of students want to learn about

dinosaurs.” As descriptions of thoughts and feelings of others, perspective sentences address the ToM issues that are at the core of social deficits characteristic of ASDs.

Affirmative sentences draw attention to important concepts (e.g., laws or rules), supply encouragement, and stress key points (Ivey et al., 2004). Rust and Smith (2006) supply an example of reassurance: “This is a good thing to do” (p. 126). Affirmative sentences can also augment the intended meaning in surrounding statements and they often share values, opinions, or beliefs important to given cultures (Kuoch & Mirenda, 2003; Reynhout & Carter, 2006; Sansoti et al., 2004).

Directive sentences suggest how to respond to social situations (ASA, 2004) and are individually tailored for eliciting desired responses. “I will try to listen to the teacher” or “I will try to sit quietly at the movies” are examples of directive sentences, which represent desired behaviors (Gray, 2000b).

Cooperative sentences tell what others will do regarding the focus of the story and how the people involved in the story will support the individual with an ASD (Kuoch & Mirenda, 2003). For example: “My mom and dad will try to remain calm while I learn to use the toilet” (p. 220). In essence, they tell what others will do in assisting the child by providing the information that identifies who will supply help and how that help will be supplied (Reynhout & Carter, 2006; Sansoti et al., 2004). Cooperative sentences describe, for example, the parents’ roles in the social situation (Ivey et al., 2004).

Control sentences are to aid in explaining abstract situations and are sometimes in the form of analogies (Norris & Dattilo, 1999). They are statements written or created by the child with ASD to identify the child’s interests or preferred writing style. They are created after the child reviews a previously written social story and then adds to the story by inserting one or

more control sentences (Gray, 2000a). For example, a child may be very interested in dinosaurs or insects. Parents or teachers can then create stories that contain them in some form. Gray (2000a) provided an example of a child who liked insects. This child became upset when someone said, “I changed my mind!” When the child read a social story that explained what people meant when they said that, the child developed this sentence: “When someone says, ‘I changed my mind,’ I can think of an idea becoming better—like a caterpillar, changing into a butterfly” (p. 13-4).

Sentences in Social Stories™ can be in either complete or partial format. Partial sentences are a type of fill-in-the-blank sentence/story type and serve as a prompt for the child to think about what might happen next. They should take the child’s level of functioning into consideration. Partial sentences encourage making a guess relating to the response of another or one’s own response, and demonstrate understanding of a concept. Partial sentences may be presented in the form of descriptive, perspective, directive, or affirmative sentences, as demonstrated by Gray (2000b):

When it is time for lunch, my teacher usually \_\_\_\_\_ (partial descriptive). During recess, I may choose to \_\_\_\_\_ (partial directive).

Amy will feel \_\_\_\_\_ if I share with her (partial perspective).

There are many things that stay the same when I have a substitute teacher. Here is my list \_\_\_\_\_ (p. 24)

Ivey and colleagues (2004) explained that social stories describe the situation and do not direct the behavior of the child. Social stories are commonly written with 0 – 1 (partial or complete) directive or control sentences for every 2 – 5 (partial or complete) descriptive, perspective, cooperative, or affirmative sentences. Gray (2000a; 2000b) recommends strictly

adhering to this sentence ratio of at least 2:1 (2 descriptive for every 1 directive) for optimal effectiveness. This sentence ratio helps to ensure that the social story focuses on describing and giving positive qualities rather than controlling or directing the individual. Sentence ratios ensure that the social story concentrates on conveying an event, idea, or task that could be important within a certain scenario, instead of supplying a behavioral list of ‘things to do’ that the person is expected to fulfill (Kuoch & Mirenda, 2003; Rowe, 1999).

Kuoch and Mirenda (2003) reported that Gray has been consistent in emphasizing that stories not conforming to the suggested ratio are improperly written. However, Crozier and Tincani (2005) showed that some modifications yield positive results. Their study used a ratio of 3:5. This study had a single subject and showed a reduction in disruptive behaviors during the intervention phase. The disruptive behaviors further decreased when the verbal prompt (i.e., “remember to raise your hand”) was added.

### *Social Story Composition*

The social story should be written from the perspective of the individual for whom it is being written (Reynhout & Carter, 2006). Appropriate language and print size are other factors to consider as well. Statements should be made in positive terms rather than focusing on negative interactions or punishments (“I will use nice words” instead of “Don’t say that”). Research shows that teachers are more effective when they utilize proactive strategies to deal with problematic behaviors (Lorimer et al., 2002; Sansoti et al., 2004). Reinforcing appropriate behaviors makes it possible to phase out or even prevent the unwanted behaviors by providing good alternatives, and teaches problem solving in the social arena (NICHCY, 2004).

The group that comprises children with ASDs is heterogeneous, exhibiting differing strengths, deficits, and needs (Ivey et al., 2004). Social stories should be individualized to

address the unique needs of the person in question. When a child has difficulty with understanding what might happen when he or she has a doctor's appointment, for example, a story can be written just for that child's individual experience:

*My name is John. I like to visit the doctor. His office is in a building. Usually, my mom takes me. My mom likes the doctor. Sometimes we have to sit in the waiting room.*

*Usually, I play with toys while I wait. Sometimes a nurse calls my name when it is time to see the doctor. Usually, the nurse takes us to a small room to wait for the doctor.*

*Sometimes the doctor comes quickly. Usually the doctor asks my mom how I am feeling.*

*Sometimes the doctor asks me to say, "Ahh," while he looks in my mouth. It is okay to go to see the doctor. Usually the doctor helps me to feel better.*

An important aspect of writing social stories involves using Gray's guidelines. Therefore, in order to have all or even some of the vital components of a social story (e.g., sentence type and ratio), individuals writing and/or implementing need some type of instruction, either formal training or reading and learning from materials on their own.

It is recommended to choose carefully the technique or techniques (e.g., adding verbal prompts or reminders, sentence types, integrating visual cues or icons into the story) that best suit the needs of the child while ensuring that language and vocabulary are appropriate. For example, social stories may convey components of appropriate behaviors and/or activities through language by means of age-appropriate reading levels incorporating topics of high interest to the child (e.g., Harry Potter, dinosaurs), using visual cues (e.g., pictures, icons), written cues (e.g., bold-faced type, colored print), or verbal cues (e.g., ask, "What do we say after we burp?") (Soenksen & Alper, 2006) and integrate these components into proper social story format. Including these components ensures the social story will be as effective as possible.

Gray and Garand (1993) noted that in cases of effective social stories, apparent and dramatic results occurred within the first week of usage.

### *Usage and Implementation of Social Stories*

Ivey et al. (2004) reported that Gray suggested three specific aims in using social stories: (a) portraying a situation and behaviors appropriate for that situation; (b) using simple and understandable language to convey how to achieve a desired goal; and (c) instruction of novel routines and expected actions. Numerous studies have shown social stories to decrease undesirable behaviors (Gray & Garand, 1993; Kuttler et al., 1998; Lorimer et al., 2002; Norris & Dattilo, 1999) and increase desirable behaviors (Sansoti & Powell-Smith, 2006; Swaggart, Gagnon, Bock, Earles, Quinn, Myles, & Simpson, 1995); both outcomes have obvious implications for parents as well as educators.

There is a growing number of research studies on the use of social stories in school (Barry & Burlew, 2004; Bledsoe, Smith-Myles, & Simpson, 2003; Crozier & Tincani, 2005; Delano & Snell, 2006; Hagiwara & Myles, 1999; Kuttler et al., 1998; Norris & Dattilo, 1999; Rowe, 1999; Scattone et al., 2002; Scattone, Tingstrom, & Wilcynski, 2006; Soenksen & Alper, 2006; Swaggart et al., 1995; Thiemann & Goldstein, 2001) and home (Adams et al., 2004; Lorimer et al, 2002; ) or both settings (Kuoch & Mirenda, 2003; Sansoti & Powell-Smith, 2006). Social stories in the school setting might be employed to increase hand washing, to teach ways to *be first* as a line leader, to prepare for a substitute teacher coming to the classroom, or in partial sentence format for use in academics. In the home, they could be utilized for morning or bedtime routines, or to prepare for a visiting relative. In community settings, they could be beneficial for trips to the grocery store or library. Other situations in which to use social stories include appropriate greetings, controlling and appropriately expressing anger, learning routines or what

can happen with changes to a familiar routine, using the bathroom, and visits to the doctor or dentist. A positive aspect of social stories is that they can be individualized to cater to the individual needs of the child or student and the individual situations.

Situations where social stories may be of particular use are instances in which the individual with an ASD is experiencing social awkwardness. According to Edelson (1997):

These individuals may try very hard to have friends, but they cannot keep them...One reason for their failure to make enduring social relationships with others may be the lack of reciprocity in their interactions, since their conversations often revolve around themselves and are self-centered...and they often lack common sense when making social decisions. (¶ 5)

Social stories in these kinds of situations can help the individual to maintain relationships with peers and others.

Reynhout and Carter (2006) proposed that social stories are attractive in that they are relatively easy to administer. However, it is important to understand the implementation of social stories in order for them to be effective. In many cases, teachers or parents want to instill desired behaviors or eliminate undesired behaviors. An important aspect of social stories is that they provide a positive type of intervention while omitting negative consequences. If appropriate behaviors are not taught to the child, he or she may substitute a different inappropriate behavior for the undesired behaviors (Coucovanis, 1997).

### *Implementation of Social Stories*

In implementing social stories, there are different approaches available that take the child's needs and capabilities into consideration: (a) reading of the story by the child or the caregiver, (b) listening to the story from an audio device, (c) computer program delivery, or (d)

video delivery (Sansoti & Powell-Smith, 2004). In the beginning, social stories are most often read to or by the child on a daily basis. In some instances, it may be appropriate to read or review a story just prior to the target situation.

It is important to give the child many opportunities to learn the task and read the story. Presentation of the story should occur on a regular basis (repetition and practicing) and should be reviewed before the situation (sometimes referred to as ‘priming’) in order for the child to have the opportunity to rehearse the skills. Providing opportunities for the child to practice what the story is teaching allows the parent or teacher to observe the intervention’s efficacy and to make changes or modifications as needed. Providing corrective feedback allows the child to learn while in the situation (Barry & Burlew, 2004).

Studies utilizing social stories as interventions used different presentation schedules. Much of the literature advocates introducing and using one story at a time and making only slight changes for different situations. For example, Swaggart and colleagues (1995) studied one subject using one story addressing one behavior and verbal prompts were used as needed. The results showed that implementing a social story in this way was effective in increasing desired behaviors and decreasing undesired behaviors.

Norris and Datillo’s (1999) study consisted of reading one of three social stories on a daily basis. Stories were read immediately prior to the target situation. Here, adult support was provided by reading the story aloud to the child to assist with the child’s understanding and with staying on task. Questions raised by the child during the intervention were addressed and personal examples relating to a story were added. Stories were kept available to the child at times other than just prior to the target situation. There were no immediate changes in inappropriate behaviors when social stories were introduced. It was not until the fifth day (out of 15

intervention days) of the social story intervention that inappropriate social interactions began to decrease and then continued decreasing through the end of the intervention, with the exception of the second to last day. The overall trend showed a 48% decrease in inappropriate social interactions. There was not a significant change in appropriate behaviors, however. The authors reported the mean level of appropriate interactions to be at 6% during baseline and at 4% during the intervention. Inversely, when inappropriate behaviors decreased, all social interactions decreased.

After repeated reading of the social story, the child with an ASD may progress to demonstrating appropriate responses and skills within the specific social situation. At that point, *fading* may be used, by reducing story reading or telling gradually, reading fewer and fewer times with only occasional or necessary review, and extending the period of time in between reading. Another method of fading involves rewriting the story with the gradual removal of directive sentences, or changing, revising, or omitting selected sentences. Fading depends on the individual's abilities and needs and, like social story construction, is highly individualized (Edelson, 1995; Gray & Garand, 1993; Reynhout & Carter, 2006). In Rowe's (1998) study, the social story intervention was read daily for the first 6 weeks. After this period, the frequency of reading the story was reduced gradually until it was discontinued in the twelfth week. The child's targeted appropriate behaviors continued and he was able to state, "I don't even read the story; I just remember it."

Social story maintenance, where the skills acquired from reading and reviewing a social story are maintained over time, has been defined by Smith (1994) as correctly responding over a set time and not dependent on a prompt for initiating the correct response during that time. Kuttler et al. (1998) conducted a study with an ABAB design to measure whether behavioral

change was maintained over time. Baseline and the first intervention phase were both conducted for 5 days. The withdrawal phase was for 3 days and the reimplementation was for 6 days. No effect was found for maintenance after the social story was withdrawn because the participant's number of target behaviors returned to baseline level when intervention was withdrawn. A possible limitation for this study was that there were two social stories being read for two problematic situations. Gray (2000a) recommends introducing one story at a time, which allows the child to focus on one concept or skill, avoiding the possibility of overwhelming the child with too much information.

Sansoti and Powell-Smith (2006) studied the effectiveness of social stories in the increase of social engagement skills. The authors pointed out, however, that, "maintenance of target behaviors was not observed over time" (Discussion section, ¶ 1). The same authors, though, claimed that for two of their subjects, the social story intervention appeared "most promising" during the time the intervention was in place. These studies suggest that repetition in the reading or telling of a social story is imperative for continued success. This is not to say that the same social stories must be repeated indefinitely, but rather that practitioners should refer back to them periodically.

Many studies use social stories with another intervention (Crozier & Tincani, 2005; Hagiwara & Myles, 1999; Kuttler et al., 1998; Scattone et al, 2002; Swaggart et al., 1995; Thiemann & Goldstein, 2001). There are numerous interventions (e.g., verbal prompting) to consider and parents and practitioners may find that having two or more in place is needed to meet the child's needs. Many of the research articles reviewed here utilize some type of verbal prompt in addition to reading social stories. Rust and Smith (2006) caution that there are confounds within the existing literature and recommend controlling for confounds as much as

possible by ensuring that no other behavioral interventions are used concurrently with the implementation of social stories so as to account for the effectiveness of the social story as an intervention on its own merits.

It is possible to modify the social story format and see positive results. Swaggart et al. (1995) provided the first empirical study of social story usage. Social stories were paired with other interventions in a school setting. All participants were attending a special education classroom specifically for behavioral problems. The targeted pro-social behaviors increased and the targeted aggressive and disruptive behaviors decreased. The researchers made modifications to the social stories based on the level of functioning of the participating children. With each child, the modifications consisted of presenting the story in a book format, with one sentence and an icon (a visual cue) accompanying each sentence to allow the children to focus on one concept at a time. The authors cite research of visual strengths in children with ASDs as justification for using icons. Sentence structure was also modified; the first story consisted of one descriptive and four directive sentences; the second used one descriptive, one perspective and four directive; the third employed three descriptive and one directive; and the fourth utilized three descriptive and two directive. The stories with a higher number of descriptive than directive sentences were more effective at increasing desired behaviors and decreasing aberrant behaviors. However, the researchers acquiesced that it was not clear that the social stories were responsible for the changes (i.e., one participant was motivated by earning cola in addition to reading a social story).

Other types of modifications to social stories are possible. Hagiwara and Myles (1999) combined visual symbols and computer-based instruction with social stories. The format was book-like and the computer software had the capability to read the story aloud. This unique method improved some skills for the participants. The first participant achieved 100% of task

completion; the second participant improved in two settings (92% in one setting); and the third participant made partial improvements in behavior in two settings. In addition to these positive results, this study also found that some participants showed generalization of newly acquired skills to other settings.

Using social stories may also increase the effectiveness of, and the child's interest in, other types of interventions when used in concert. Lorimer et al. (2002) found that other intervention tools (i.e., a visual schedule and timepiece) held limited interest for the participant until they became incorporated into a social story. It was observed that this student eventually increased his understanding and interest in the use of his specific educational tools. Parents and a therapist were trained in identifying and measuring two target behaviors: the frequency of precursors to tantrum behavior and tantrum behaviors (i.e., screaming, hitting, kicking, and throwing objects). Parents collected data and reliability checks were made by the researchers. Their study used an ABAB design. Tantrums were the targeted behavior to decrease and the social stories addressed reducing precursors to tantrum behaviors. While tantrums occurred in the baseline and intervention withdrawal phase (occurring 5 out of 7 days), they were markedly decreased during the intervention phases. On 6 out of 7 days, there were no tantrums exhibited.

The study of Lorimer and colleagues (2002) also explored the influence of social stories on disruptive behaviors. Using *positive behavior supports* (e.g., affirmative rather than negative statements), the social stories targeted social interaction and reduction in problem behaviors in addition to constructing new competencies. It is important to consider that, when individuals are able to behave during various events in desirable ways, they will have a positive association and a positive learning experience with that event. The researchers note that social stories are *user-*

*friendly*, making them desirable for the individual with an ASD and the person or persons who would be implementing.

Another study involving modifications is that of Thiemann and Goldstein in 2001. Modifications occurred as participants' needs changed over the course of the study. Two participants' targeted pro-social skills were decreasing in frequency so the story was modified. All targeted social skills were combined into one story and represented on one cue card. This study also involved typically developing peers. For one participant (who became frustrated at times when asked to read his story), taking turns with a peer in reading helped alleviate his frustration. The effectiveness of pictorial and written cues followed by video feedback was evaluated. Participants with an ASD were paired with two typically developing peers for 30-minute sessions. Peers' training sessions involved social story implementation and other methods, specifically, participating in social activities, and video feedback self-evaluation. Treatment sessions were 30 minutes in length and occurred twice a week. Results indicated success for the intervention but it was unclear if the social story intervention or the combined interventions were responsible.

Scattone et al. (2002) conducted a study with three children with ASDs, two who were 7 and one who was 15 years of age. Social stories were the sole intervention and no other subsequent interventions were in place for two of the participants. Prior to and during the study's implementation, the third participant participated in another study, which was designed to increase on-task behavior. This social story intervention was set in a school. A multiple baseline design across participants was used, in which a different target behavior was addressed for each child. Targeted behaviors included staring, chair tipping, and shouting. Results of this study showed reductions in all three behaviors: chair tipping decreased from occurring in 50% of

intervals during baseline to 4.6% of intervals during intervention; staring from 66.9% baseline to 18.25%; and shouting from 18.15% to 5.1%.

### *Parental Involvement with Social Stories*

The research demonstrates that for parents, as well as other practitioners, social stories take less time and effort to create and are comparatively inexpensive compared to many interventions (Scattone et al., 2002). According to Crozier and Sileo (2005), extensive training is not a requirement for learning to utilize social stories. When social stories are implemented in a natural setting, such as the child's home, they not only change behaviors in the home, but the desired behaviors are more likely to generalize to other settings (Lorimer et al., 2002).

Parents' involvement is scant in research studies of the use of social stories to change behaviors of children with ASDs. However, parental involvement is an important element in helping to remediate many problematic behaviors or increase desired behaviors. According to Gray (2000a, 2000b, 2004), the guidelines must be followed to ensure social stories are developed using positive language, promote social understanding, and provide social information. The research studies in which parents have implemented social stories have used stories being authored by the researchers. There have not been studies, to date, in which parents have authored social stories for their children with ASDs.

This study will add to the literature by evaluating how parents and professionals learn to write social stories and their opinions of the social story writing process. This will assist in determining whether social stories are able to be correctly written through the purchase and use of Gray's materials or if more training is required (e.g., attending a workshop).

This study asks three questions:

1. How well do parents and educational professionals write Social Stories™, using Gray's system, after reading written instructional materials?
2. Do the Social Stories™ written by parents and educational professionals significantly improve after additional instruction in writing Social Stories™?
3. What are parents' and educational professionals' opinions of Social Stories™?

## CHAPTER III

### METHOD

#### *Participants*

Fifteen female volunteers participated in this study. Four were mothers of a child on the Autism Spectrum; two were special education teachers (one for a middle-school resource room and the other for an early-childhood special education classroom); seven were paraprofessionals in early childhood special education classrooms; and two were paraprofessionals in a middle-school resource room. The parents' children had the diagnoses of Asperger's Disorder, PDD, and PDD-NOS. The two professional teachers have worked with children who have been diagnosed as having Autism, PDD, PDD-NOS, severe Autism, and Rett's Disorder. Paraprofessionals reported having worked with children diagnosed with Autism, Asperger's, and ASD.

The educational levels of parents varied from high-school graduate to master's degree. Their occupations included teacher, school cafeteria cook/clerk, stay-at-home mom, and systems administrator. Both teachers have master's degrees. Paraprofessionals reported their levels of education as varying from high-school graduates to bachelor's degrees.

#### *Materials*

Materials for this study included the consent form, participation questionnaire, the researcher's presentation script, fictional account of a boy with an ASD, condensed version of Gray's (2004) *Social Stories 10.0: The New Defining Criteria & Guidelines*, power point slide show, laptop computer, account of a second boy with an ASD, and exit survey.

Consent forms included information about the training, time involved, informed consent, and participation eligibility (see Appendix A). The participation questionnaire asked whether the participant was a parent of a child with an ASD or an educator who was currently or had in the

past worked with a child with an ASD; the participant's occupation and educational level; if they had received (formal) training in writing Social Stories™ prior to this study; if there were any questions or comments prior to participation; and contact information. (See Appendix B.)

The presentation script included the instructions and procedures for the experiment. (See Appendix C.) The researcher followed the script to give the introduction, instruction for reading and writing the first story, power point training, and instruction for reading and writing the second story.

The 30-minute power point slide show and accompanying handouts were based on *Social Stories 10.0: The New Defining Criteria & Guidelines* and original material by the researcher. Gray (2004) has provided *Social Stories 10.0: The New Defining Criteria & Guidelines* for sale on her website: <http://www.thegraycenter.org/>. This document is 21 pages long. The researcher prepared a condensed version. (See Appendix D.) The researcher omitted materials that did not address the basic components of story writing (e.g., using rhyme and rhythm, incorporating icons or illustrations). The condensed version is 1,929 words in length, printed in 11-point type on 5 pages.

Included with *Social Stories 10.0* is Gray's Social Stories Checklist of nine criteria. This checklist appeared at the end of the condensed version. These were the criteria on which the participants' stories were evaluated. Following are the criteria in italics with accompanying explanations:

1. *The story meaningfully shares social information with an overall patient and reassuring quality.*

The story should provide information the child seems to be missing. The story uses patient and reassuring language, such as “I will try” instead of “I will”; uses language that is less stressful, more suitable for the child, and does not provoke anxiety.

2. *The story has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information.*

The topic is clearly identified in the first sentence or follows immediately after an attention-getting sentence (e.g., My name is Jeremy).

3. *The story provides answers to the relevant wh questions.*
4. *The story is written from a first person perspective, as though the child is describing the event and/or his experiences in the situation.*
5. *The story uses positive language, omitting descriptions or references to challenging behaviors in favor of identifying positive responses.*

Aberrant behavior is *not* mentioned; appropriate responses *are* given.

6. *The story is comprised of relevant or appropriate sentence types: descriptive (required), with an option to include perspective, cooperative, directive, and/or affirmative.*
7. *The story follows the Social Story Formula: ratio of sentences that describe to sentences that direct  $\geq 2:1$ .*
8. *The story matches the ability and interests of the child, and is literally accurate.*

The story uses language the child may easily understand, appropriate wording and length.

If appropriate, the story may use an item of interest to the child (e.g., When I finish my chore, I may play video games).

Sentences provide information that may be carried out literally:

No: I will try to hurry and be done in quick as a wink.

Yes: I will try to hurry and be finished more quickly.

9. *The title of the story meets all applicable Social Stories™ criteria:*

1. shares information, the topic or most important point of the story;
2. may pose or announce answers to the most important *wh* questions;
3. is written from a first person perspective;
4. uses positive language or announces something the child currently does well;
5. is easily understood and interesting to the child.

The first profile of a fictitious child with an ASD was about a boy named “Zac.” (See Appendix E). The social stories that participants wrote for Zac represented the pretest condition. The second profile is of a child with an ASD named “Jon” and is based on an actual boy from a behavioral study (Clarke, Dunlap, & Vaughn, 1999). The social stories for Jon represented the post-test condition. (See Appendix F.)

The Exit Survey was a social validity instrument, consisting of 12 questions (see Appendix H). Using a 5-point Likert scale, participants were asked to rate materials, efficacy of the training, future use, recommendation to others, importance of learning to write stories, satisfaction with the instruction and support they received during the intervention, and the difficulty of writing both stories. Space for additional comments was included.

### *Procedure*

Volunteers were recruited through personal contacts. The researcher provided each individual with a copy of the consent form and attached questionnaire. Respondents were informed in the consent form that their participation in the study would require approximately 2 hours. Permission was obtained on the questionnaire to audio record questions and comments; originally the training sessions were to be recorded, but this was discontinued after the first two

sessions, due to comment retrieval difficulty. Comments and questions were recorded by the researcher using a tape recorder for the first two sessions, then by taking notes (see Appendix H).

Eligibility for participation in the study was determined from parents' and practitioners' answers on the initial questionnaire and was contingent on several factors. Eligibility for parents was based on whether they had a child who had been formally diagnosed with an ASD. For practitioners, participation was based on whether they had worked with a child with a formal diagnosis of an ASD in the past or were currently working with a child with this label. Additionally, neither parents nor practitioners could have received formal training in Social Stories™ (i.e., attended a workshop by Carol Gray or an associate of hers or watched her training video). If they had some form of formal training in social stories, they were asked to explain the nature of the formal training they received. Parents and practitioners who had no experience or who had some experience but no formal training in Social Stories™ were approved for participation. Another qualifier was that parents and practitioners be able to devote approximately 2 hours for training and story composition.

Parents and practitioners who met the requirements were asked to participate. All volunteers met criteria, and participated for the experiment's entirety. The researcher met individually with six participants (four mothers, two educators) and met with two groups (one group of 3, one group of 6).

The researcher read from the training script to standardize each session as much as possible. The researcher gave each participant the condensed version of Carol Gray's (2004) *Social Stories 10.0: The New Defining Criteria & Guidelines*, the Social Story Checklist, and writing materials (i.e., paper and pencils). Participants were instructed to read this material themselves, to make notes if they wished and to ask questions or make comments as they wished,

but were encouraged to do as much as they could on their own. The researcher was present when participants read this material. When they finished, they were given the description of a fictional child named “Zac” who was a child with ASD who would benefit from a Social Story™ to help him with his after school chore routine of feeding and watering the pets. Participants were asked to write a Social Story™ for Zac that would help him be more successful in completing this chore. The story was to be based on what they learned from the condensed version of *10.0*. The researcher informed participants their questions should only address clarifying the task (e.g., wording, definitions, directions). The researcher did not supply feedback to participants on their first story attempt at this time. The researcher collected the stories after they were finished and allowed for a short break before the session continued.

Participants then received Social Stories training by listening for approximately 30 minutes to the power point presentation based on *Social Stories 10.0: The New Defining Criteria & Guidelines* and original material (e.g., examples) by the researcher. Participants were given power point handouts to take notes on and keep (see Appendix I). The researcher presented the power point slide show on a laptop computer. During the presentation, the researcher more extensively covered the separate points of the Social Story™ writing process. (For the purposes of this study, only 9 out of the 10 points were covered, as only the writing elements and not illustrations were the focus). Participants were invited to participate in this interactive section of training by supplying their own sentences and labeling sentences in order for the researcher to check understanding. Ample time for questions, answers, and comments was given.

Next, participants were asked to read another child’s profile. “Jon” was a child with ASD who could benefit from a Social Story™ about completing his morning routine. Participants were again asked to put their first name at the top of the page and to compose another Social

Story™ based on all the training information they had received. The researcher took participants' questions and comments but participants were again encouraged to do as much as they could independently.

When they were through writing, the researcher read over each story to check for handwriting clarity; this ensured that the researcher had no questions about the wording of stories. Individual feedback on each story was offered to all participants and the researcher made individual arrangements with each participant who requested feedback.

Finally, participants were asked to complete the exit survey regarding their opinions of the Social Story™ writing instruction they received.

## CHAPTER IV

### RESULTS

#### *Scoring of Stories*

Each of the 15 participants wrote two stories, one for Zac and one for Jon. The resultant 30 stories were scored according to nine criteria (see Appendix J). These criteria were represented in 23 variables that were scored for each story. A graduate student in the Counseling program at Wichita State University was trained in writing and scoring Social Stories™. Her training continued until she and the researcher achieved an overall inter-rater reliability of .9 or better on practice stories, using the formula,  $x/y * 100 = z$ , where x is the number of observations agreed upon, y is the total number of observations, and z is the percentage of agreement between the two observers. The two coders then read and scored the participants' stories. The mean inter-rater percentage of agreement for all variables across the 30 stories was 93.78%. Rathvon (1999) indicated that interobserver agreement percentages should be at least 80% to accomplish reliability and validity.

Interrater agreement was examined for each variable. All variables related to the title (i.e., title information, title *wh* questions, title first person perspective, title positive language, and title ability) were coded the same (i.e., 100% interrater agreement). For the variables representing parts of the story, introduction and body were coded the same (i.e., 100% inter-rater agreement); only one story was coded differently for conclusion. However, there was much less interrater agreement in coding the variables representing sentence types.

The overall inter-rater agreement was computed for sentence types, based on the variables of the numbers of descriptive sentences, perspective sentences, cooperative sentences, affirmative sentences, directive sentences, combined describing-directive sentences, opinion

sentences, inaccurate sentences, inappropriate sentences. The mean interrater percentage agreement for sentence types was 85.19%. This percentage agreement was lower than for all variables, but still greater than the criterion of 80%.

In order to increase interrater agreement, scoring of sentence types in 18 stories was re-examined. These were stories for which there was not interrater agreement of numbers of various sentence types. Both initial coders and a third coder (the researcher's thesis chair) rescored the sentences of these 18 social stories. The researcher and the third coder discussed each sentence that was not coded the same by all three coders. When the three coders disagreed, clarification was made by reexamining sentence type coding descriptions. If agreement was not reached after discussion, a final decision was made by the researcher.

Regarding the Social Story Formula (SSF), participants did not show their computation work for the researcher to check comprehension of the technique. The researcher and first coder counted the sentences to try to compute the SSF for each story in both conditions. In order to compute the SSF, the researcher made the decision to only compute the SSF for stories that contained only correct sentence types. However, each story contained mistakes, thus no stories were able to be scored on the SSF criterion.

### *Story Titles*

There were five criteria for the story titles, including title information, *wh* questions, first person perspective, positive language, and ability level. Title information was whether or not the story had a title that shared the topic or most important point of the story. Title *wh* questions dealt with whether the title answered relevant *wh* questions. First person perspective was rated on whether or not the title appeared in first person. Positive language referred to whether the title used positive or neutral language as opposed to language that was commanding, directive, or

negative. Ability was used to measure the extent to which the title would be easily understood by a boy like Zac or Jon.

Participants did reasonably well in writing titles for their first stories, those for Zac (see Table 2). The mean proportions were more than half in all areas, ranging from .56 to .60. Post-test scores of the titles of the Jon stories showed improvement in all areas, with proportions ranging from .73 to .82. The pretest and post-test scores for the five title criteria were compared by two-tailed t-tests. Significant improvements were made in all title criteria: title information,  $t(14) = -2.78, p = .02$ ; *wh* questions,  $t(14) = -2.81, p = .01$ ; first person perspective,  $t(14) = -2.65, p = .02$ ; positive language,  $t(14) = -2.96, p = .01$ ; and ability,  $t(14) = -2.48, p = .03$ .

TABLE 2  
STORY TITLE CRITERIA OF INFORMATION, WH QUESTIONS, FIRST PERSON PERSPECTIVE, POSITIVE LANGUAGE, AND ABILITY

Criteria	Max.	Pre Test		Post Test	
		<i>M</i> ( <i>SD</i> )	Pr	<i>M</i> ( <i>SD</i> )	Pr
Information*	3.00	1.67 (.90)	.56	2.20 (.86)	.73
<i>Wh</i> *	3.00	1.73 (.96)	.58	2.33 (.90)	.78
FPP*	3.00	1.80 (1.01)	.60	2.47 (.92)	.82
PL*	3.00	1.73 (.96)	.58	2.47 (.92)	.82
Ability*	3.00	1.80 (1.01)	.60	2.33 (.90)	.78

*Note.* Abbreviations are used in the table. Pr = Proportion of maximum points. Max = maximum points for criterion.

\* $p < .05$

### Story Parts

The parts of story criteria consisted of introduction, body, and conclusion. The number of options varied; therefore, proportions are reported in addition to mean scores (see Table 3). In the pretest, participants did well in writing the introduction and body, achieving proportions of possible points of .70 and .89, respectively. They struggled with appropriate conclusions, as indicated by the proportion of only .48. After training, posttest scores showed improvement in all three areas, but the change was significant for only conclusion,  $t(14) = -2.69, p = .02$ . A ceiling effect may have been reached for introduction and body as mean pretest scores were high.

TABLE 3  
PARTS OF STORY CRITERIA FOR INTRODUCTION, BODY, AND CONCLUSION

Criteria	Max	Pre Test		Post Test	
		<i>M (SD)</i>	Pr	<i>M (SD)</i>	Pr
Introduction	4.00	2.80 ( .77)	.70	3.13 ( .64)	.78
Body	3.00	2.67 ( .49)	.89	2.80 ( .41)	.93
Conclusion*	4.00	1.93 ( .88)	.48	2.80 (1.08)	.70

*Note.* Abbreviations are used in the table. Pr = Proportion of maximum points. Max = maximum points for criterion.

\* $p < .05$

### Language Aspects

Language components included four items: *wh* questions, first person perspective, positive language, and ability. *Wh* questions referred to statements within a story that answered who, what, when, where, how, and why. First person perspective was required in order for the story to sound as if the child had written it himself. Positive language referred to whether positive wording and positive response options were given rather than referring to negative

behavior. The ability criterion dealt with whether the story was written for the appropriate cognitive level of the child (see Appendix J).

Proportions were reported since the number of options varied among criteria (see Table 4). Participants did very well in using correct language aspects in their stories for Zac, the pretest condition, with proportions of possible points ranging from .78 to .91. Proportions were higher at post-test, the Jon story, for all four language component criteria. Two-tailed t-tests were used to compare pretest and post-test stories for language components. Only *wh* questions showed a significant improvement,  $t(14) = -2.45, p = .03$ . Ceiling effects may have occurred for first person perspective and positive language. Ability did not increase significantly.

TABLE 4  
LANGUAGE COMPONENTS OF INFORMATION, WH QUESTIONS, FIRST PERSON PERSPECTIVE, POSITIVE LANGUAGE, AND ABILITY

Criteria	Max	Pre Test		Post Test	
		<i>M (SD)</i>	Pr	<i>M (SD)</i>	Pr
<i>Wh</i> Questions*	4.00	3.13 (.74)	.78	3.53 (.74)	.88
First Person Perspective	3.00	2.73 (.59)	.91	2.93 (.26)	.98
Positive Language	3.00	2.67 (.62)	.89	2.87 (.35)	.96
Ability	4.00	2.80 (1.01)	.70	3.27 (.80)	.82

*Note.* Abbreviations are used in the table. Pr = Proportion of maximum points. Max = maximum points for criterion.

\* $p < .05$

#### *Sentence Types*

Describing types of sentences included descriptive, perspective, cooperative, and affirmative (see Table 1). Descriptive sentences describe *who, what, when, where, how,* and/or *why* about people and/or events. Perspective sentences inform the person with an ASD about the

internal states of others. Cooperative sentences tell the person who will do what to help. Affirmative sentences enhance surrounding statements (i.e., This is a good thing to do). They were eliminated from analysis because some copies of the condensed *10.0* version did not include the information about them.

Mean numbers are provided for each correct sentence type for pre and post-test conditions (see Table 5): descriptive, .87 ( $SD = 1.46$ ) to 3.87 ( $SD = 2.64$ ); perspective, .60 ( $SD = .91$ ) to 1.00 ( $SD = .85$ ); and cooperative, .20 ( $SD = .41$ ) to 1.00 ( $SD = .76$ ). All three sentence types showed improvement (see Table 5). There were significantly more descriptive sentences,  $t(14) = -5.20, p = .00$ , and cooperative sentences,  $t(14) = -4.00, p = .00$ , written after training.

Directive sentences provide appropriate response options to the person for whom the story is written. Comparisons between the numbers of correct directive sentences were made from pretest to post- test conditions. The number of correct directive sentences in stories written after only reading the written materials ( $M = .87; SD = 1.25$ ) was fewer than the number of correct directive sentences written after receiving the training ( $M = 2.73, SD = 1.71$ ). There were significantly more correct directive sentences written after training,  $t(14) = -3.44, p = .00$ .

The scoring criteria included four types of sentences that did not follow Gray's (2004) guidelines (see Table 6). Describing/directing sentences contained information that was both descriptive and directive. Opinion statements referred to sentences that superimposed an opinion or other internal state of the person for whom the story was written. Inaccurate statements were factually incorrect. Inappropriate statements were incorrect directive sentences or sentences mentioning negative behaviors.

TABLE 5

## INDIVIDUAL AND GROUPED COMPARISONS OF CORRECT DESCRIPTIVE, PERSPECTIVE, COOPERATIVE, AFFIRMATIVE, AND DIRECTIVE SENTENCES

	Pre Test	Post Test	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>	
Descriptive	.87 (1.46)	3.87 (2.64)	.00
Perspective	.60 ( .91)	1.00 ( .85)	.29
Cooperative	.20 ( .41)	1.00 ( .76)	.00
Affirmative <sup>a</sup>	N/A	.73	
All Describing	1.67 (2.09)	5.87 (3.00)	.00
Directive	.87 (1.25)	2.73 (1.71)	.00
All Correct Sentences	2.53 (2.33)	8.60 (3.42)	.00

<sup>a</sup>Affirmative sentences were not examined because the researcher gave some participants a copy of the condensed version that did not contain affirmative sentence information.

Participants actually included more describing/directive sentences, opinion statements and inaccurate statements in their post-test stories than their pretest stories, but these changes were not significant. They did make significantly fewer mistakes of inappropriate sentences after receiving training,  $t(14) = 4.10$ ,  $p = .00$ .

Although the total number of sentences in the story increased from pretest to post- test, it was not a significant increase. Pretest stories contained an average of 11.73 sentences ( $SD = 7.62$ ). Post-test stories consisted of a mean of 13.87 sentences ( $SD = 4.84$ ). Both amounts are similar to the range Gray (2004) recommended (i.e., 2 to 12).

TABLE 6

## COMPARISONS OF INCORRECT DESCRIBING/DIRECTING, OPINION, INACCURATE, AND INAPPROPRIATE SENTENCE TYPES

	Pre Test	Post Test	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>	
Describing/Directing	.20 ( .41)	.33 ( .35)	.67
Opinion	.80 (1.82)	1.47 (1.51)	.22
Inaccurate	.13 ( .35)	.33 ( .49)	.19
Inappropriate	7.93 (5.69)	2.60 (2.87)	.00
All Incorrect Sentences	9.07 (6.94)	4.53 (3.94)	.01

Participants improved in the total number of correct describing sentences (i.e., descriptive, perspective, and cooperative) that they wrote, from a mean of 1.67 sentences ( $SD = 2.09$ ) in the pre test condition to a mean of 5.87 sentences ( $SD = 3.00$ ) in the post test condition (see Table 5). This change was significant,  $t(14) = -5.85$ ,  $p = .00$ . Also, the number of incorrect sentences (i.e., describing/directing, opinion, inaccurate, and inappropriate) decreased after training, from a mean of 9.07 sentences ( $SD = 6.94$ ) for pretest to a mean of 4.53 sentences ( $SD = 3.94$ ) for post- test (see Table 6). This was a significant decrease in the number of incorrect sentences after training,  $t(14) = 2.94$ ,  $p = .01$ .

Correct describing sentences were compared with correct directive sentences in pretest and post- test conditions. Gray's (2004) guidelines indicated a 2:1 ratio of describing sentences to directive sentences. For each story the number of total correct describing sentences minus the total correct direct sentences was computed. As this difference becomes greater, Gray's preferred

ratio of 2:1 would be approached or exceeded. The mean of these difference scores was .80 for the Zac stories ( $SD = 2.54$ ). The mean of these difference scores for the Jon stories was 3.13 ( $SD = 3.48$ ). These means were significantly different,  $t(14) = -3.46$ ,  $p < .01$ . Participants had moved closer to the goal of a ratio of 2:1 after the training.

### *Social Validity Instrument*

The Exit Survey (see Appendix G) was an instrument designed by the researcher to gain the opinions and comments of participants. Participants rated each item on a Likert scale from 1 (Not at all) to 5 (Very Much). For the Exit Survey results, the researcher reported the mean and standard deviation of ratings for each item (see Table 7). Frequencies are reported in Appendix K. Means were more than half for 10 items of the 12 items.

One comparison looked at whether respondents found the second story easier to write than the first story. There was an increase in ratings from the first story ( $M = 2.00$ ,  $SD = 1.46$ ) to the second story ( $M = 3.07$ ,  $SD = 1.33$ ) indicating that the second story was easier to write, and the difference was significant,  $t(14) = -2.12$ ,  $p = .05$ .

Comments supplied by respondents included topics such as usefulness, correct directive sentence techniques (e.g., “try” and “may”), choosing sentence types, more training, and being easier to understand. Categories of questions and comments made during the sessions and full comments supplied on survey were included in Appendix H.

TABLE 7  
EXIT SURVEY

Subject and Number of Question	Mean	S.D.
Materials easy to understand (1)	3.80	.77
Easy to write (2)	2.20	1.21
Training easy (3)	3.87	.92
Appropriate for variety of situations (4)	4.33	.62
First SS easy (5)	2.00	1.46
Understand how to use techniques (6)	3.33	1.05
Likely use again (7)	3.40	1.30
Suggest to others (8)	4.00	1.13
Important to learn to write SS (9)	3.47	1.41
Pleased with instruction (10)	4.67	.49
Materials helpful (11)	4.13	.74
Second SS easy (12)	3.07	1.33

## CHAPTER V

### DISCUSSION

The present study brings to the literature on Social Stories™ that parents and educational professionals can learn to write Social Stories™ using publically available written materials. Further, parents and educational professionals increased their skills when, in addition to reading information about how to write Social Stories™, they participated in an interactive training session. In some areas (e.g., positive language, first person perspective), participants did well in the first stories they wrote, whereas in other areas (e.g., directive sentences, conclusion), they needed additional training.

Results in the present study are most consistent with Quilty's (2007) findings. In that study, paraprofessionals were taught to write and then implement social stories for three children with whom they worked. Just as in the present study, Quilty used Gray's materials with story examples. The paraprofessionals watched a segment of Gray's (2000b) video in which the purpose and goals of Social Stories are described. Another similarity was that at the end of the training session, paraprofessionals were asked to write social stories using specific scenarios. Stories were checked for a title, introduction, body, conclusion, answers to *wh* questions, positive language, greater proportion of descriptive than directive statements, and ability level. Quilty found that paraprofessionals could be taught to write and implement social stories for use with students on the autism spectrum. In the present study, parents as well as teachers and paraprofessionals, successfully learned to write social stories. Their stories were evaluated using a detailed rubric based on Gray's (2004) guidelines.

Parents and educational professionals in the current study also learned how to write social stories. However, additional training should occur since no participant's stories were written well

enough to calculate the Social Story Formula; there were too many incorrect types of sentences contained in each story written—for both pre test and post test conditions. In actual settings, stories should be rewritten and the formula calculated to ensure a 2:1 ratio of describing sentences to directive sentences (Gray, 2004).

Participants wrote better titles for their stories after the additional interactive training. Gray (2004) mentioned that a story without a title or a careless title is not a Social Story™. Since the title is the child's first glimpse at what the story will be about, it is an important component in writing Social Stories™. Different parts of the title were easier (e.g., first person perspective) than others (e.g., title information), even with additional training.

Social stories have three major parts: introduction, body, and conclusion. Participants did well with introductions and story bodies after reading the condensed 10.0, but their story conclusions on their Zac stories were not adequate. Conclusions are an important aspect of Social Stories™. Gray (2004) explained that the conclusion gives the child the opportunity to consider the overall meaning of the story. The participants' conclusions markedly improved after additional training.

The language components of Social Stories™ improved in all areas after additional training. Ceiling effects may have occurred for positive language and first person perspective as pre test scores were high in these categories. The use of *wh* questions improved significantly with additional training. Gray (2004) wrote that basic information with lots of detail is needed to write Social Stories™. *Wh* questions answer basic features of a situation or concept and are integral to Social Story™ composition. Descriptive sentences are the sentence type most often used to answer *wh* questions.

Gray (2004) recommended that stories for younger children or individuals with lower cognitive abilities be written from the first person perspective. However, she warned against writing statements regarding the child's inner state (e.g., opinions, feelings, beliefs, what he/she knows or believes), the reason being that the story's author cannot say for certain what the inner state of the child may be. Participants did very well at writing their stories in first person. Perspective sentences are intended to inform the child of the inner state (e.g., thoughts, feelings) of *others*. Opinions, in the context of this study were deemed an incorrect sentence type as they referred to the inner state of the *child*. Perspective and opinion types of sentences may have been confused with one another, as statements of opinion actually increased in the post test condition.

Descriptive sentences are statements of fact and are used to identify relevant and important aspects of the story. They are the only required type of sentence in Social Story™ composition, making proper knowledge of how to write them and their uses vital to writing Social Stories™. The number of correctly written descriptive sentences used by participants increased significantly after additional instruction.

The number of correctly written directive sentences also increased significantly after additional instruction. The concept of these sentences proved the most difficult for participants to grasp in the training session. Comments were made about using “try” as in “I will try to get dressed by myself,” remarking that it was difficult to not use “I will ...” to get a child to perform or complete a task. Gray (2004) stressed that directive sentences should *gently* guide behavior to relieve any anxiety, lest children feel that they must perform the task exactly as written in the story.

Incorrect types of sentences were categorized as combined describing and directive sentences, inaccurate sentences, opinions, and inappropriate sentences. These categories are

based on Gray's (2000a; 2000b; 2004) criteria and the types of mistakes respondents made. Few describing/directing, inaccurate, or opinion sentences occurred in the stories in either pre or post test conditions. However, there was a significant decrease in the number of inappropriate sentences after the interactive training. Many of these were incorrect directive sentences; directive sentences, if written carelessly, can set a negative or unfavorable tone for the story. Omitting the gently guiding, patient technique may give the child an unsuccessful or negative experience. One important element of Social Stories™ is eliminating absolutes (e.g., always, every day). Saying "I will" may create an anxiousness within the child if he or she feels the task must be performed exactly as expected, leaving no room for error. The literal interpretation may cause undue anxiety (Gray, 2004).

Changes in the stories after the additional training are noteworthy, not in that longer stories were written, but that the quality of sentences improved. Two very desirable outcomes occurred after the additional training: correct describing sentences increased and incorrect describing sentences (i.e., inaccurate sentences) decreased. Overall, all correct describing sentences and correct directive sentences increased after additional instruction.

Gray's (2004) guidelines stressed that the equation of 2:1 for describing vs. directive sentences helps define the relationship between the various sentence types. The purpose of the equation is to ensure that each story is focused on the description of events or interactions, and to explain the underlying rationale of what people do, say, or think within different situations. Participants increased the difference between describing and directive sentences after additional training, thus moving closer to the desired 2:1 ratio. A few post-test stories could have been easily rewritten and the Social Story Formula calculated.

The participants did feel that the training was good and that social stories are a useful intervention for children with ASDs, as indicated by their ratings on the Exit Survey. They rated the second story, after the additional training, as easier to write than the first story.

### *Limitations*

There were several limitations with the present study. Because the number of participants was low ( $N=15$ ), comparisons of parents' and educational professionals' stories could not be made. Affirmative sentences were excluded from analysis due to the researcher's error of distributing copies of the condensed *10.0* that had omitted the affirmative sentence information. The Exit Survey could be a vastly improved social validity instrument to better discern what types of difficulties participants were experiencing by asking more specific questions about what types of components they were struggling with (e.g., descriptive sentences, directive sentences, etc) and giving them the opportunity for questions and comments for each component.

Materials were only shortened versions of Gray's (2000a, 2000b, 2004) works and were not as encompassing as her materials. Due to the input received in the early stages of gathering information, time constraints played a part in the researcher shortening Gray's materials in order to obtain volunteers for the study. Originally, the study was to have participants view Gray's (2000b) video, which was 180 minutes long. The researcher could not get any volunteers to agree to participate for this length of time.

### *Future Directions*

Future research should take into account parents versus educational professionals to determine who is more proficient at writing Social Stories™. Incorporating more training sessions and including a segment to have participants check their own stories for errors and make corrections would be an added learning component. Using Gray's actual materials, the video

could be shortened or shown in two to three sessions, using the accompanying work book. After completing the video and work book activities, participants could then practice writing stories. To really learn Social Stories™, participants should be willing to devote a considerable amount of time, be willing to have their stories checked for errors and comprehension, and be given the opportunity to rewrite and compute the Social Story Formula. Writing opportunities for Social Stories™ should include stories that applaud what a child does well, and not only address behavioral interventions.

The most interesting and significant aspect of this study was the overall improvement in the quality of the Social Stories™ from pre test to post test. As expected, training is required beyond merely reading about Social Stories™ and attempting to write them.

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## APPENDICES

APPENDIX A  
CONSENT FORM

WSU Letterhead

March 24, 2009

Dear Parents and Educators,

You are invited to participate in a study of an intervention to be initiated in April, 2009. I am conducting this study on the use of Social Stories™ as my graduate thesis project, under the guidance of Dr. Nancy McKellar in the Department of Counseling, Educational and School Psychology (CESP), Wichita State University (316-978-3326). The aim of this project is to study how well parents and practitioners of children with Autism Spectrum Disorders (ASDs) understand the process of writing Social Stories™ based on the materials of Carol Gray, who defined and systematized Social Stories™.

You have received this invitation from the person who delivered this letter to you. Copies of this consent form will be made available for distribution at each location and/or copied and sent via email. I am requesting 10-15 parents and/or practitioners to participate.

Volunteers are asked to complete a short questionnaire to determine eligibility. Provided is a self-addressed stamped envelope in which to return your questionnaire to the researcher.

The study should only require approximately two hours to complete. The researcher will give a presentation with activities for participants to complete: reading materials, viewing a power point slide show, writing two social stories based on what they have learned, and taking an exit survey. Participants may elect to receive individual feedback on their stories at a later date. During the training, an audio recording device will record all questions and comments.

APPENDIX A (continued)

Participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your future relations with Wichita State University. If you agree to participate in this study, you are free to withdraw from the study at any time without penalty. Participants are entitled to a written copy of this consent form. Other information may be obtained from the W.S.U. Office of Research Administration at 978-3285.

**If you are interested in participating in this study, please contact Candy Crawford at 316-778-1348 or 316-644-0965 or candyrhc@yahoo.com. I look forward to hearing from you soon.**

Respectfully,

Candy Crawford  
Candidate for M.Ed. in Educational Psychology

Your signature below expresses your willingness to participate in the described study.

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Parent

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Date

APPENDIX B

PARTICIPATION QUESTIONNAIRE

Name of parent  / professional : \_\_\_\_\_

Occupation(s) of Participant: \_\_\_\_\_

Your child's formal diagnosis or the child(ren)'s formal diagnosis whom you have worked with /are currently working with/anticipate working with: \_\_\_\_\_

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Participant's highest level of education:

Some high school

High school graduate

Some college

Bachelor's Degree

Master's degree

Other  \_\_\_\_\_

Are you able to spend 2 hours learning about Social Stories™?

Yes  No

During the training, an audio recording device will record questions and comments. Do you have any objections to being recorded? Yes  No

Have you had any experience with social stories? Yes  No

If yes, was it formal training? Yes  No

If yes, was it Carol Gray's workshop or materials? Yes  No

Please briefly explain what your previous experience with Social Stories has been:

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PARTICIPATION QUESTIONNAIRE (continued)

What concerns or questions do you have at this time?

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Please write any additional comments and indicate times available (2 hours) to complete Social Story™ training. Please also include contact information.

Time(s) available: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Best time to contact you: \_\_\_\_\_

Additional comments:

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APPENDIX C  
PRESENTATION SCRIPT

*Turn on tape recorder.*

Hello, my name is Candy Crawford. I am a graduate student at Wichita State University. As part of my master's thesis, I have asked you here to learn about Social Stories™. Social Stories™ are most associated for use with children with an Autism Spectrum Disorder. They provide missing social information by supplying a sort of social script for situations or events that are problematic for the person with an ASD. I'll be audio recording our session today, so that I will have a record of the questions and comments that may be said today. Are there any questions before we begin? We can also stop throughout if you have any questions. (*Address any questions*).

I have asked you to meet with me because you (a) are a parent/parents of a child with an ASD, (b) are an educator who has worked or is working with a child with an ASD.

Carol Gray systematized Social Stories™ in the early 90's. She has since come out with updated versions. We will be learning about her 2004 version: *Social Stories 10.0: The New Defining Criteria & Guidelines*. "10.0" gets its name from 10 guidelines—however, we are only looking at 9 since we are only concerned with the *writing* process.

*Hand out condensed 10.0.*

I'll be asking you to read over a condensed version of Carol Gray's Social Stories 10.0 (from 21 down to 5 pages) including the Social Story Checklist. In a moment, I'll ask you take a few minutes to read over this information about what constitutes a Social Story™. You may ask questions or comment about the material, but I encourage you to do as much as you can on your own. Feel free to write notes on this or another piece of paper—the 10.0 material is yours to

## APPENDIX C (continued)

keep. After reading 10.0, *(hold up Zac's profile)* I'd like you to read over a profile of a child; *(hand out Zac's profile)* this is a child with an ASD who is having difficulty with a daily routine. After reading over the information about the child, I'd like you to write a social story based on the information you've just read from the 10.0 condensed version; you are asked to use this material to help you write your Social Story™. Included in *Social Stories 10.0: The New Defining Criteria & Guidelines*, is the Social Story Checklist. The checklist makes it possible for you to check your own work--this may be used to compare any story to the 9 defining characteristics. Please let me know if you have any questions or concerns, but again, I encourage you to write as much of it as you can on your own. I'll collect them when you have finished. I'll first have you read the Social Story™ material.

Your task is to write a Social Story™ that will help Zac be more successful in completing his chore in feeding the pets. You may ask questions, but I'm encouraging you to write the Social Story™ on your own as much as possible, using the notes from the Social Stories 10.0 and the Social Story™ Checklist. Please include your first name and last name's initial at the top of the page. Please let me know when you are finished and I'll collect your stories. When you are finished please take a short break. Good luck! Any questions about what I'm asking you to do?

*Address questions.*

*Participants writing... afterward, I collect stories. [Break].*

Now I'd like to take you through a more encompassing version of Carol Gray's Writing Social Stories 10.0. This will take approximately 30 minutes.

*Script Version of 10.0 (30 minutes)*

## APPENDIX C (continued)

Please remember that I welcome and encourage your questions and comments as we view this power point.

Social Stories 10.0 gets its name from the 10 points that Carol Gray has made in this piece of literature. For us here today, we will only cover 9 points extensively, as we are concentrating our efforts on the writing process and not adding illustrations to our Social Stories.

For our purposes today, I want to share that Social Stories™ are a means of supplying missing information in a positively stated way. The way Social Stories™ attempts to share information supports more effective responses for the child. We are not bringing attention to a behavioral issue; rather we're giving the child an appropriate response in a problematic situation. This is done by sharing, that is supplying, missing information.

Please keep in mind these important things as you learn about the different aspects of Social Stories™. Each child will have his or her own unique learning style, their abilities will vary, they will have different challenges to work through, and they will be interested in different things—this can be an important for getting their attention. All of these things may impact their understanding of social situations and events. Finally, we need to do our best to see things from their perspectives. What are they feeling in this situation? Why are they showing disruptive behaviors during this event? What has happened to upset them? What changes can be made to make this situation work for them instead of against them?

Positive language: This is a big deal in Social Story composition—remember, you're wanting to supply appropriate responses in a gently guiding manner. Listen to the differences in these sentences: I will pay attention, versus, *I will try to listen and pay attention*. And, I will write an accurate Social Story™ today, versus, *I will try to write an accurate Social Story™*

## APPENDIX C (continued)

*today*. I'll go into this in more depth later on—I wanted to introduce this idea of writing in a “patient, positive, and gently guiding” way early on to get you used to this concept.

A Social Story, like other stories, has an introduction, a body, and a conclusion. The introduction focuses the attention on clearly stating the topic. A single sentence may complete the task. For example: *If I lose a toy, people can help*. Sometimes we may recruit the child's attention first, *My name is Jeremy*, and then announce the topic. A couple of good introductory sentences for our first story attempt could have included: Feeding the pets is an important chore, or, *My name is Zac*. Feeding the pets is an important chore. Does anyone/Do you have an introduction they/you would like to share? Any questions about the introduction?

The body immediately follows the introduction, adding further description and /or explanation with statements like, *Mom or Dad knows how to help find my toy. We will try to think and look*. One version for Zac's story could go as follows: Usually, the cat food is in the bin. Sometimes the bin is empty. This is okay. Mom or Dad can help me find the cat food. The cats like to be fed. Sometimes the cats' water bowl is empty. This is okay. When the water bowl is empty, it is a good idea to put more water in it. I can use the sink in the kitchen. Any questions about the body?

The conclusion refers us back to the beginning – the concepts, situations, and/ or achievements that initiated the Story – restating the original purpose with the benefit of additional information: *People can help me look for my toy*. In addition to organizing and sequencing our direction in writing a Story, this framework clarifies information for your audience. For Zac we could sum it up by saying, Feeding and watering the cats is a good thing to do. Any questions about the conclusion?

## APPENDIX C (continued)

A Social Story™ answers *wh* questions. The 5 *wh* questions can serve as an outline that identifies *where* and *when* the situation occurs, *who* is involved, *how* events are sequenced, and *what* occurs. Details are then considered—what cues or concepts may the child have missed? This is often the answer to the last *wh* question, *why*.

A story can answer *wh* questions very efficiently. For example, a single, opening sentence can answer many *wh* questions: *My family (who) is going (what ) to the beach (where) today (when)*. This may be followed with a brief statement that answers how the trip to the beach will occur: *We'll ride in our car to the beach*, or a sentence that explains why this activity is planned: *Many families have fun when they visit the beach*. This way, the story identifies *who* is involved, *where* and *when* a situation occurs, *what* is happening, *how* it happens, and *why*. For Zac, we could answer many *wh* questions—Does anyone/Do you have any to volunteer?

Here are some possibilities of *wh* questions to address in his Social Story™:

What? Feeding the cats. Specifically, getting the pitcher for water and the dog and cat food.

Where? Where are these items located? Who? The dog, the cat, parents, brothers (can help).

When? After school. How? There are 5 steps involved in the chore: (1) Get the pitcher filled with water (there is one designated for this purpose). (2) Take the water and fill up dog's bowl, then cats' bowl. (3) Get cats' food scoop and put one scoop in both dishes. (4) Get dog's food scoop and put one scoop in dish. (5) Put pitcher back in kitchen. Why? The cats and dog require food.

Why else? It is good for Zac to have an important responsibility! Any questions regarding *wh* questions?

Social Stories™ are written from a 1<sup>st</sup> or 3<sup>rd</sup> person perspective. For our purposes today, and because I want you to think about the situation from the child's perspective, the stories we

## APPENDIX C (continued)

write today should be from the child’s perspective, or 1<sup>st</sup> person perspective, as though the child is describing the event as much as possible. Examples for Zac could include: My name is Zac. (Not: “Zac feeds the cats,” since this is in the 3<sup>rd</sup> person). My brother feeds the cats in the morning. Usually on Saturdays and Sundays I feed the cats in the morning. I will try to carefully put food in the cats’ bowl. If some spills, I will try to clean it up. After school, I feed the cats. Any questions about 1<sup>st</sup> person perspective?

Positive language is used throughout the story. No references to or descriptions of negative behaviors are included, the rationale being that it only emphasizes undesirable behaviors. For example: *I will try not to yell in the library*, emphasizes “yell”. Instead, we clearly and positively describe desirable responses and provide the rationale behind them and we share ideas about what to do in a given situation. For example: *I will try to talk quietly in the library*.

For Zac there are several possibilities, not limited to these examples: The cats and dog like to be fed. Feeding the cats and dog is a good thing to do. I am being responsible when I take care of the pets. I will try to feed and water the pets after school. Any questions about positive language?

Avoid using “absolutes” in a story—if the event changes in some way, it can be a source of anxiety for the child with ASD. Careful wording using alternative language may help alleviate some anxiety. Instead of “always”—as in *The cat food is always in the bin*, try: *Usually the cat food is in the bin*. Instead of “every”—as in *We have recess every day*, try: *We have recess each school day*, or, *Most school days we have recess*, or, *Each school day we have recess*. Any questions about alternative language?

## APPENDIX C (continued)

We will look at 5 types of sentences included in social stories—4 that describe and 1 that directs. Here are the quick definitions: Descriptive Sentences are factual statements that are free of opinions and/or assumptions. Perspective sentences are statements that refer to, or describe a person's internal state, their knowledge/thoughts, feelings, beliefs, opinions, motivation, physical condition/health. Cooperative Sentences identify what others will do to assist the child. Affirmative Sentences enhance the meaning of surrounding statements and often express a commonly shared value or opinion within a given culture. Directive Sentences identify a suggested response or choice of response to a situation or concept, gently guiding the child's behavior.

Social Stories™ always contain descriptive sentences and descriptive sentences always provide factual statements that are free of opinions and/or assumptions. They identify the most relevant factors in a situation or the most important aspects of the topic. Descriptive sentences are the only required type of sentence and are the most frequently used. They answer the *wh* questions. Listed are examples for Zac. *My name is Zac. Feeding the cats is my chore. When I feed the cats, I am doing my chore. Usually, the cat food is in the bin. Sometimes, the cat food bin is empty.* Are there any questions about Descriptive Sentences?

Perspective sentences are statements that refer to, or describe, a person's thoughts, knowledge, feelings, beliefs, opinions, motivation, or physical condition. They are rarely used to describe the child's feelings, etc., but rather the feelings, etc., of others providing this information to the child. For example,

- My teacher knows about me (knowledge/thoughts)
- Sometimes, my sister likes to play the piano (feelings)

## APPENDIX C (continued)

- Some children believe in the Easter Bunny (belief)
- Many adults like calamari (opinion)
- Some children like to earn stickers for helping at clean-up time (motivation)
- Sometimes, people feel sick (physical condition)

Are there any questions about Perspective Sentences?

Cooperative Sentences identify what others will do to assist the child. For example, in a toileting story, a cooperative sentence may read: *My mom, dad, and teachers will help me as I learn to use the toilet.* This sentence cues the child as to who will help him or her. Here's another example: *My art teacher can help me with my painting.* Both examples tell the child *who* is going to do *what* to help. Cooperative sentences remind parents, peers, and/or professionals of *their* role in the success of the person with ASD. Another example also demonstrates how the people who help will help: *Mom and Dad will try to remain calm as I learn to use the toilet.* Are there any questions about Cooperative Sentences?

Affirmative Sentences “affirm”, that is, they support or encourage by enhancing the meaning of surrounding statements and often express a commonly shared value or opinion within a given culture. Specifically, the role of an affirmative statement is to stress an important point, refer to a law or rule, or reassure. The following are examples of affirmative sentences following a different sentence, for you to see them used in context. Most people eat dinner before dessert. *This is a good idea* (stressing an important point). I will try to keep my seat belt fastened. *This is very important* (reference to a law).

## APPENDIX C (continued)

One child slides down the water slide at a time. *This is a safe thing to do* (reference to a law).

The toilet makes a sound when it flushes. *This is okay* (reassure). More examples: Usually,

toilets are loud. *This is okay*. There are many choices in the cafeteria. *It's good to make choices*. I

will try to feed the cats myself. *This is a good thing to do*. The cats will like it if I feed them. *This*

*is an important thing to do*. Are there any questions about Affirmative Sentences?

Directive Sentences gently guide the behavior of the child with ASD by identifying a suggested response or choice of responses to a situation or concept. These sentences are carefully developed with close attention to the possibility of literal interpretation. For example, beginning a directive sentence with "I will" or "I can" may mislead a child who may believe that the response must be completed exactly as written, with no room for error. Instead, directive sentences often begin with "I will try to..." "I will work on..." or "One thing I may try to say (do) is..." Directive sentences may also be stated as a series of response options. Sample directive sentences are: I will try to keep the paint on the paper. I may ask Mom or Dad for a hug. I may decide to play on the swings. I may decide to play with something else. Here are some more examples. Try to think of one yourself. Are there any questions about Directive Sentences?

There is a Social Story Formula which, when followed, makes a Social Story describe more than direct. The Social Story Formula is an equation that defines the relationship between the different types of sentences in a Social Story™. Its purpose is to ensure that every Story focuses on describing interactions or events, or explaining the rationale that underlies what people think, say, or do in a given situation. At the same time, the formula limits the number of sentences that suggest what a child "should do" in a given situation. In fact, in many cases, the

## APPENDIX C (continued)

use of directive sentences may not be necessary or advisable—remember that only descriptive sentences are required. The Social Story Formula helps avoid making “to-do” lists.

Sentences in a Social Story™ are sorted into 2 categories: those that describe and those that direct. Sentence types that describe are descriptive, perspective, cooperative, and affirmative. Sentences in this category provide that patient and reassuring quality that is characteristic of all Social Stories™.

Sentences that direct in a Social Story™ also share information. Their role is to guide or suggest what a child may say, or do in a given situation. These sentences are outnumbered by their descriptive counterparts by a ratio of at least 2:1.

Count the number of sentences that describe and divide by the number of sentences that direct. The ratio should be greater than or equal to 2.

Using the Social Story Formula is a simple mathematical process. Given a completed story, the total number of sentences within each category are totaled and placed in the formula. Sentences that describe are placed in the numerator, those that direct in the denominator. If the answer is less than 2, the story is not a Social Story™.

This is my story for Zac and it consists of 21 sentences—this can be okay; Zac is a little older (12) and may benefit from a story of this length. For younger children 2 to 12 sentences is a good guide. This story is long but provides a way to share several examples. Here’s my example story: Taking Care of the Pets: A Story for Zac

I have an important job: I take care of our pets. –Descriptive

I feed and water the pets after school on school days. –Descriptive

Feeding and watering the cats and dog is a good thing to do. –Affirmative

APPENDIX C (continued)

The cats and dog like to have fresh water to drink and food to eat. –Descriptive

On weekdays after school, I will try to feed and water the pets all by myself. –Directive

I may take my time as I feed and water the pets. –Directive

Sometimes I can't find the water pitcher. –Descriptive

This is okay. –Affirmative

If I need help, I may ask Mom or Dad or my brother for help. –Directive

Mom, Dad, or Brother will calmly help me find the water pitcher. –Cooperative

I will try to remain calm while we find the water pitcher. –Directive

Remaining calm is a good thing to do. –Affirmative

If the food container is empty, I will try to tell Mom or Dad or Brother that there is no more food. –Directive

Mom and Dad will like it when I feed and water the pets. –Descriptive

I may play with the pets after I feed and water them. –Directive

I like to play with the cats and dog. –Descriptive

This is a good thing to do. –Affirmative

It is good to be responsible. –Affirmative

I am being responsible when I take care of the pets. –Descriptive

Feeding and watering the pets is my important job. –Descriptive

To figure your sentence ratio you're going to first count the number of sentences that describe: (count on each slide) 123456789101112131415 (write 15). Then count the number of sentences that direct: (again, count on each slide) 123456. (write 6). Divide 15 by 6 and we get

## APPENDIX C (continued)

2.5. We're wanting greater than or equal to 2, so we've got it! Any questions as to how I got that?

In addition to defining the relationship between the various types of sentences, the Social Story Formula can help parents and professionals identify sentences that are potentially unclear or confusing. Sometimes, a single sentence may meet the defining criteria for more than one type of sentence. For example: *My mom and dad are calm while I learn to use the toilet*, is a perspective sentence which could also be considered a cooperative sentence. Since both perspective and cooperative sentences are in the same category (sentences that describe), it's unnecessary to determine if it is one type of sentence or the other.

Sometimes the sentence types in question are for different categories. For example: *I may use the computer*. Is the intent to describe one of the many activity options in the home or classroom, making this a descriptive sentence? Or is its intent to direct the child to use the computer? When it's confusing whether the role of the sentence is to describe or direct, the statement needs to be rewritten to clarify its meaning; this catches confusing sentences before a story is reviewed with a child.

One of the most frequent mistakes in developing Social Stories™ is directly related to its formula. Stories have been written that are more directive than descriptive—we want to avoid making “to do” lists for the child. Are there any questions about the Social Story Formula?

A Social Story™ has a format that is tailored to the abilities and interests of its audience, and is usually literally accurate. The only exception to literal accuracy is when using allegories or metaphors. For our purposes, we won't be covering that today. Stories can be general, where many children may benefit, but usually we try to individualize.

## APPENDIX C (continued)

For our purposes here, format refers to how information is structured and shared with the child. Tailoring of format involves the length of the story, organization of the text within it, and selection of appropriate sentence structure and vocabulary. There are many potential choices that lie within these factors. Many factors will be quickly eliminated as the child's attention span, need for repetition and predictability, and tendency to interpret information literally are used as a guide to selection. The format is developed from an understanding of the child, so that it may help the child understand.

A quick word about tailoring the format: Part of the format involves story length; the information in a story never exceeds or falls short of a child's attention span. For many audiences, the time required to peruse each page—or an entire story—needs to be brief! Generally, a Social Story™ for a young child will contain 2-12 short sentences (eliminating commas to create two or more shorter sentences is often recommended). This matches the duration of many of their other interactions and activities throughout their day. Any questions?

The organization of a Social Story™—how sentences are developed and used in relationship to one another—compliments a child's abilities and interests. Conversely, any organization that is challenging or confusing is avoided. A story's organization should also be consistent with the topic.

1) Words and phrases are selected that will be accurate, even if interpreted literally. Many children with ASD make “face value” assessments of phrases and statements, without the benefit of the meaning that social insight provides. A Social Story™ contains the most absolutely sincere language possible; there is no difference between intended and stated meanings. If the

## APPENDIX C (continued)

intended meaning of a word or phrase differs from its literal interpretation, it is not used. Any questions about sentence organization or structure?

2) Verbs are carefully selected. Children with ASD often struggle with the meanings of verbs. It's easy to appreciate the potential for confusion. Two considerations apply. First, positive verbs are preferable to their negated counterparts. For example: instead of: I will not run in the hallway, it's better to use: I will try to walk in the hallway. Second, verbs are notorious for the subtle but critical contrasts between them. Consider for example, the literal difference between: Dad will get the milk at the store, and Dad will buy milk at the store. People who get milk may be shoplifting; we want Dad to buy the milk. Any questions about verb usage?

3) Alternative vocabulary may be used to maintain the relaxed and positive quality of a Story. Some children will demonstrate strong negative emotional reactions to specific words. For example: words like change, new, or different may be associated with uncomfortable situations, and needlessly distract attention from the topic of the Story. Other words may be used in their place that relay the same meaning. For example: instead of new, the word better may be used; another can be used instead of different; missing may be a better option than losing. The use of alternative vocabulary helps to keep a child's attention on the topic at hand. Though the use of alternative vocabulary may not always be necessary, it can be an important strategy that makes all the difference! Any questions about alternative vocabulary?

To summarize modifications in vocabulary, when writing a SS, the first words that come to mind may not be the best place on paper. Four considerations apply:

1) literal accuracy, 2) careful selection of positive verbs, and 3) the possible use of alternative vocabulary. Any questions?

## APPENDIX C (continued)

A SS title meets all applicable SS criteria. The title of a SS plays an important role. Right from the start, the title begins teaching by positively identifying the main topic in a style and format consistent with the text that follows. The title is a child's first contact with the story, a single representative of all the information that follows. To create a title, an author considers the criteria that define SSs and applies those that are relevant to its development. The result is a title that:

- 1) Shares information, the topic, or most important point of the Story;
- 2) May pose or announce answers to the most important *wh* question(s);
- 3) Is written from a first person perspective;
- 4) Uses positive language or announces something the child currently does well; and
- 5) Is easily understood and interesting to the audience

The title is an integral part of a SS, requiring the same care and consideration as the text. In other words, a story that is written according to all of the SS Defining Criteria and Guidelines except for its negative or careless title, is not a SS! Applying relevant defining criteria to the title ensures that it matches the patient, unassuming, and reassuring style of the Story that follows; a Story developed by caring and concerned parents and professionals.

In summary, a Social Story™ describes a situation, skill, or concept in terms of relevant social cues, perspectives, and common responses in a specifically defined style and format. I want to briefly go back through the points relevant to us for today's purposes:

A Social Story:

- 1) Meaningfully shares social information with a patient and reassuring quality;

## APPENDIX C (continued)

- 2) Has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information;
- 3) Answers *wh* questions
- 4) Is written from a first person perspective
- 5) Uses positive language, omitting descriptions or references to negative behaviors in favor of identifying positive responses;
- 6) Always contains descriptive sentences, with an option to include any one or more of the 4 remaining sentence types (perspective, cooperative, directive, or affirmative);
- 7) Describes more than directs, following the Social Story Formula;
- 8) Has a format that is tailored to the abilities and interests of its intended audience, and is usually literally accurate;
- 9) Has a title that meets all applicable Social Story Criteria.

[Last slide]. Any questions or comments?

Now I'd like you to read a different child's profile and again attempt a social story according to the child's needs, using what you now know about writing social stories. You may again use the 10.0 notes, all of your power point information, and the checklist. Any questions or comments? *Hand out profile of Jon.* The directions for this task are to write a Social Story™ that will help Jon to be more successful during his morning routine. Please let me know when you are finished or have any questions. Please begin.

*Participants will indicate when they are finished. I will have them individually read aloud both stories to be audio recorded. If participants want to have feedback on their stories, arrangements will be made to meet and go over each story.*

APPENDIX C (continued)

*Closing:* I'd like to thank you (all) for taking the time to take part in learning about Social Stories™. I hope this has been and will continue to be a valuable tool for you.

## APPENDIX D

### CONDENSED VERSION OF SOCIAL STORIES 10.0

#### Social Stories: Gray's Criteria for Correctly Writing a Social Story™

1. A Social Story™ meaningfully shares social information with a patient and reassuring quality, and at least 50% of all Social Stories™ applaud achievements.
  - Social Stories™ attempt to identify and share information that supports more effective responses.
  - Social Stories™ attempt to share information the child may be missing.
  - Social Stories™ usages include addressing concepts, skills, problematic situations, a record of the child's achievements, and what he/she does well.
    - Consider the child's learning style, abilities, interests, and challenges and their impact on his/her social understanding; determine how an event or concept may be perceived from the individual's point of view.
    - A Social Story™ uses positive language.
      - Omitting references to challenging behaviors
      - Text reads "I will try" instead of "I should" or "I will"
  
2. A Social Story™ has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information.
  - There are two choices for an introduction:
    - Introduction: attempts to focus the child's attention by clearly stating the topic. Example: *If I lose a toy, people can help.*
    - Introduction: attempts to recruit the child's attention. Example: *My name is Jeremy.* Then, the topic is announced within the story. (The topic is then referenced in the second sentence).
  - Body: attempts to add further description and/or explanation. Example: *Mom or Dad knows how to find my toy.*
  - Conclusion: attempts to restate the original purpose with additional information. Example: *People can help me look for my toy.*
    - The introduction, body, and conclusion attempt to clarify information for the audience (the individual/s for who/m the story is written).

## APPENDIX D (continued)

3. A Social Story™ answers the “wh” questions.
  - Social Stories™ require basic information about a specific topic (situation, interaction, concept, or skill) to be obtained prior to writing. The 5 “wh” plus 1 “how” questions supply an information outline:
    - ❖ Where: *Where does the situation occur?*
    - ❖ When: *When does the situation occur?*
    - ❖ Who: *Who is involved in the situation?*
    - ❖ What: *What occurs in this situation?*
    - ❖ How: *How are events sequenced in this situation?*
    - ❖ Why: *Safety issues? Social expectations? The family is taking a trip? To answer why something is happening or has happened. This can be the most challenging question to answer*
  
4. A Social Story™ is written from a first or third person perspective.
  - First person perspective: From the individual’s point of view (usually for younger or more severely challenged individuals).
  - Third person perspective: Written like a newspaper article (usually for older individuals and/or higher ability levels).
  
5. A Social Story™ uses positive language.
  - Important to describing typical or desired behaviors in a specific situation. The problematic behaviors are not mentioned, rather the typical or desired behaviors are described within the story. Examples:

DO	DO NOT
I will try to <b>talk quietly</b> in the library.	I will try <b>not to yell</b> in the library.

When worded in a positive voice, the audience is supplied with usable information.

## APPENDIX D (continued)

6. A Social Story™ always contains descriptive sentences, with an option to include any one or more of the five remaining sentence types (perspective, cooperative, directive, affirmative, and control sentences).
- **Descriptive Sentences:** Factual statements free of opinions and assumptions, attempting to identify the most relevant factors in a situation or the most important aspects of the topic. Descriptive sentences are the only sentence *required* in a Social Story™. They are the most frequently type of sentence used, contain answers to the “wh” questions, and bring logic and accuracy to a Social Story™. Examples:
    - My name is \_\_\_\_\_.
    - Sometimes, my Grandma reads to me.
    - Many children play on the playground during outdoor recess.
  - **Perspective Sentences:** Statements that refer to, or describe, a person’s internal state, their knowledge/thoughts, feelings, beliefs, opinions, motivation, or physical/health condition. Perspective sentences are *rarely* used to describe the internal state of the individual with ASD—the only exception is when the child’s *own* references to positive thoughts or feelings are used (i.e., *I really like to swim*) or if it is something that would be true of most people (i.e., *Sleeping helps me to feel rested*) or something (e.g., *Water feels wet*). Usually, perspective sentences refer to the internal status of *other* people. Examples:
    - My teacher or substitute knows I have speech at 10:00 (knowledge/thoughts).
    - Sometimes, my sister likes to play the piano by herself (feelings).
    - Some children believe in the Easter Bunny (belief).
    - Many adults like calamari (opinion).
    - Some children like to earn stickers for helping at clean-up time (motivation).
    - Sometimes, people feel sick (physical/health condition).
  - **Cooperative Sentences:** Identify what others will do to assist the individual. Cooperative sentences remind parents, family members, peers, and/or professionals of *their* role in the success of the individual with ASD. They may also help to ensure a consistent response by a variety of people to a behavior or situation. They may be written as partial statements to help an individual identify others who may assist him/her as he/she learns an new skill, and how they can help. Example:
    - People who can help me get my boots on are \_\_\_\_\_.
    - When I feel frustrated, others can help me by \_\_\_\_\_.
  - **Affirmative Sentences:** Enhance the meaning of surrounding statements and often express a commonly shared value or opinion within a given culture. Affirmative sentences stress an important point, refer to a law or rule, or reassure. Affirmative sentences usually immediately follow a descriptive, perspective, or directive sentence. Examples: (Affirmative sentences are in italics)
    - Most people eat dinner before dessert. *This is a good idea* (stressing an important point).
    - I will try to deep my seat belt fastened. *This is very important* (reference to law and safety).
    - One child slides sown the water slide at a time. *This is a safe thing to do* (reference to a rule).
    - The toilet makes a sound when it flushes. *This is okay* (reassure).

## APPENDIX D (continued)

- Directive Sentences: Gently guide the behavior of the individual with ASD by identifying a suggested response of or choice of responses to a situation or concept. Directive often start with *I will try to...*, or *I will work on...*, or *One thing I might say (do) is...* Directive sentences may also be stated as a series of response options. Examples:
    - I will try to keep the paint on the paper.
    - I may ask Mom or Dad for a hug.
    - I may decide to play on the swings. I may decide to play with something else.
7. A Social Story™ describes more than directs, following the Social Story™ Formula.
- The Formula is an equation that defines the relationship between the two categories of Social Story™ sentences: those that describe (descriptive, perspective, cooperative, and affirmative) and those that direct (directive and control).
  - The Social Story™ formula is a ratio that guides the content of the story by ensuring that sentences that describe outnumber sentences that direct by 2 or more.
  - After a story is completed, the total number of sentences within each category are totaled and placed in this formula:

$$\frac{\text{Number of sentences that describe}}{\text{Number of sentences that direct}^*} \geq 2$$

\*If there are no directive or control sentences, use 1 as the denominator.

8. A Social Story™ has a format that is tailored to the abilities and interests of its audience, and is usually literally accurate.

## APPENDIX D (continued)

### Social Story Checklist

The Social Story Checklist from Gray's *Social Stories™ 10.0: The New Defining Criteria & Guidelines*:

1. The story meaningfully shares social information with an overall patient and reassuring quality.
2. The story has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information.
3. The story provides answers to “wh” questions, describing the setting or context (where), time-related information (when), relevant people (who), important cues (what), basic activities, behaviors, or statements (how), and the reasons or rationale behind them (why).
4. The story is written from a first person perspective, as though the child is describing the event.
5. The story uses positive language, omitting descriptions or references to negative behaviors in favor of identifying positive responses.
6. The story is comprised of descriptive sentences (objective, often observable statements of fact), with an option of any one or more of the following sentence types: perspective sentences (that describe the thoughts, feelings, and/or beliefs of other people); cooperative sentences (to explain what others will do in support of the child); directive sentences (that identify suggested responses or choices of responses to a given situation); and/or affirmative sentences (that enhance the meaning of surrounding statements).
7. The story follows the Social Story Formula:

DESCRIBE*	$\geq 2$
DIRECT**	

\*Sentences that describe: descriptive + perspective + cooperative + affirmative

\*\*Sentences that direct: directive

Sentences that Describe: \_\_\_\_\_ divided by Sentences that Direct: \_\_\_\_\_ = \_\_\_\_\_

8. The story matches the ability and interests of the audience, and is literally accurate.
9. The title of the story meets all applicable Social Story™ criteria.
  1. Shares information, the topic or most important point of the story;
  2. May pose or announce answers to the most important “wh” questions;
  3. Is written from a first or third person perspective;
  4. Uses positive language or announces something the child currently does well;
  5. Is easily understood and interesting to the audience.

APPENDIX E  
TRAINING PROFILE OF “ZAC”

Directions:

Please write a Social Story™ for Zac to help him be more successful in completing his chore.

You are to please use the 10.0 condensed version and Social Story™ Checklist to help you complete the story.

Profile of “Zac”

A family’s life is disrupted by significant problems associated with a child’s failure to complete a chore: feeding the pets (1 dog, 2 cats). To correct the problems and help build a smoother and more agreeable routine, you will assess the situation to write an appropriate Social Story™.

Zac is a 12-year-old boy with PDD-NOS. He is in the seventh grade and attending most classes in a resource room. He is reading at about a third grade level, but is otherwise on grade level in most subjects. Zac has some difficulty with social interactions, but is able to hold age-appropriate conversations and express his feelings most of the time. Zac will often become upset or angry when he is given a task to complete and told to “hurry” or when he is given a certain amount of time to complete the activity in.

This information is from interviews and observations from parents and siblings. Zac is not completing his chore when asked to do so. He will instead only play with the pets, forget to get the water pitcher, or turn on the television to find and watch a favorite program. When he is reminded of his task, he will say “in a minute”. If asked if he has fed and watered the pets, Zac will say, “almost”. This chore is to be done when he comes home from school.

## APPENDIX E (continued)

This chore consists of 5 steps:

1. Get the pitcher filled with water (there is one designated for this purpose).
2. Take the water and fill up dog's bowl, then cats' bowl.
3. Get cats' food scoop and put one scoop in both dishes.
4. Get dog's food scoop and put one scoop in dish.
5. Put pitcher back in kitchen.

He is supposed to do this chore independently and has demonstrated that he can do so. He has had difficulty in finding the pitcher—sometimes it will be in the dishwasher or in a cabinet—if it's not already out on the counter next to the sink. He has been told that he can open the dishwasher or cabinet, or he may ask for help in finding the pitcher, but he is inconsistent in asking for assistance.

Zac knows which containers are the cats' and dog's food containers. If a container is out of food, he doesn't tell anyone; he has been asked to let mom or dad know if the food containers are empty. He has demonstrated understanding of "full", "some", and "empty".

He has been told that he may play with the pets while he is watering and feeding them and after he has completed the task. This is something he looks forward to and enjoys and is reinforcing as a reward for other types of tasks.

APPENDIX F  
TRAINING PROFILE OF “JON”

Directions:

Please write a Social Story™ for Jon to help him be more successful in completing his morning routine. You may use the 10.0 condensed version, Social Story™ Checklist, and your power point notes to help you complete the story.

Profile of “Jon”

A family’s life is disrupted by significant problems associated with a child’s failure to complete a morning “get ready for school” routine. To correct the problems and help build a smoother and more agreeable routine, you will assess the situation to write an appropriate Social Story™.

Jon is a 10-year-old boy who has recently been diagnosed with Asperger’s Disorder. He is in the fifth grade and attends a classroom for students with speech and language difficulties. Academically, he is on grade level in most subjects, with the exception of reading, in which he is described as having particular problems in comprehending abstractions. Although his social interactions are inconsistent, Jon is able to carry out age-appropriate conversations and can communicate his preferences without difficulty. Jon often exhibits problem behavior when he is given demands or time lines to complete an activity. At such times, he often runs out of a room, uses perseverative speech, and/or engages in crying and tantrums. Jon’s family includes his mother, his father, and two younger brothers, ages 5 and 8.

## APPENDIX F (continued)

The following information is based on parent and sibling interviews and observations.

Jon is failing to get dressed in the morning when instructed; instead, he plays with his pet hamsters, runs around the house, or watches the Weather Channel on television. When the school bus comes to pick him up (8:00 a.m.) an hour after he gets up (7:00), his mother either has to rush him out of the house without his shoes on or drive him to school. During times when Jon has exhibited problem behaviors (agitation, yelling, repetitive speech and stomping his feet), it's observed that he cooperates only in allowing his mother to dress him in the living room.

The morning routine consists of 6 specific steps:

1. Getting out of bed.
2. Going to the bathroom.
3. Changing from pajamas to underwear.
4. Putting on pants, shirt, socks, and shoes.
5. Brushing hair.
6. Walking out to the breakfast table in the kitchen.

This routine requires Jon to have the ability to complete each dressing step independently.

The observations raised questions about his ability to do the steps of the routine without assistance. Most days, Jon only puts on his pants and shirt by himself and requires his mom's assistance in putting on his socks and shoes. His ability to tie his own shoes independently may be overestimated. When he attempts to put on his socks, he will get frustrated by the effort it takes, throw his shoes across the room, leave the area, refuse to continue dressing, and/or engage in other, unrelated activities.

## APPENDIX F (continued)

It appears as though the function of Jon's problem behavior was to escape from his morning dressing routine and engage in other activities that operated as competing reinforcers. It seems that routine was difficult and frustrating for Jon in some respects and that it was preferable to him to spend time with his favorite activities than to attempt to complete the routine.

During the interview with Jon's mother, she reported that specific changes had been made to ease Jon's morning routine:

- Ankle socks that are easier for him to put on
- Shoes that do not need tying; cord "laces" require pulling to tighten (since he had difficulty tying shoes)
- Having him get completely dressed while in his bedroom; his clothes and shoes will be laid in a specific area for easy access
- Incorporating Jon's choice of reinforcer (e.g., toy as reward) into the routine (and story)

## APPENDIX G

### EXIT SURVEY

#### SOCIAL VALIDITY INSTRUMENT

Please read each item carefully and circle the number that best describes your response.

Use the following scale to determine how each statement reflects your opinion.

1 Not at all	2 Just a little	3 Somewhat	4 Quite a bit	5 Very Much
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1. Materials given to me were easy to understand.

1 2 3 4 5

2. Social Stories are easy to write.

1 2 3 4 5

3. The training process was easy to follow.

1 2 3 4 5

4. This intervention would be appropriate for a variety of situations.

1 2 3 4 5

5. The first social story was easy for me to write.

1 2 3 4 5

6. I understand how to use the techniques at home /school during everyday activities to address different goals I may have for my child/the child I work with.

1 2 3 4 5

7. I am likely to use this intervention again.

1 2 3 4 5

8. I would suggest this intervention to others.

1 2 3 4 5

9. It was important to me to learn how to write social stories myself.

1 2 3 4 5

10. I was pleased with the instructional/support assistance I received.

1 2 3 4 5

11. The materials I received were helpful.

1 2 3 4 5

APPENDIX G (continued)

12. The second Social Story was easy for me to write.

1 2 3 4 5

Please write any comments that you have on the use of Social Stories.

Thank you for your time and participation in this project.

## APPENDIX H

### PARTICIPANTS' QUESTIONS AND COMMENTS

#### Categories of Questions and Comments from Training Sessions

4 about the amount of writing

2 about including a title

3 about positive/negative behavior

4 about the purpose and goal of the story

3 about the writing process

1 about the Social Story Formula

3 about first person perspective; 1 about third person perspective

1 about directive sentences

1 about descriptive sentences

3 about alternative language

1 about descriptive and directive seeming close to the same

## APPENDIX H (continued)

### Exit Survey Comments

They are useful for all children.

I had no idea what a Social Story was before. Now I do.

In addition to #6—Need my notes. In addition to # 10—Very positive. In addition to # 12—Easier. Comment: It was beneficial to add statements as “I will try, I can, I may.” Also good to know to write positive statements throughout Social Story.

Interesting to think of their use outside a “social problem” context.

Learning to pick the different types of sentences would be a good lesson.

In addition to #8—but with x training!

Need to be easier to understand and not as long in the classroom.

A longer class would be helpful. It is a lot of information to grasp.

Would need more training one on one.

APPENDIX I

POWER POINT HANDOUT

Appendix I



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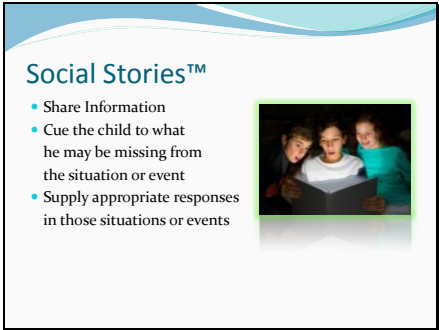
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APPENDIX I (continued)

Consider the child



- Learning style, ability level, challenges, & interests
  - The impact on social understanding
- What is *his* point of view?
- What can the *adult* in the situation do?

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Positive Language

- Never refer to a negative behavior  
—think “replacement behavior”
- Try “try”
  - I will pay attention.
  - I will try to listen and pay attention.
  - I will write an accurate Social Story™ today.
  - I will try to write an accurate Social Story™ today.

-----Patient, positive, gently guiding-----

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Introduction, Body, Conclusion

- A Social Story™ has an introduction that clearly identifies the topic or gets the attention of the child with a topic-identifying sentence immediately following:
  - Feeding the pets is an important chore.
  - My name is Zac. Feeding the pets is an important chore.

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### Introduction, Body, Conclusion

- The body adds detail and further describes and/or explains:
  - Usually, the cat food is in the bin. Sometimes the bin is empty. This is okay. Mom or Dad can help me find the cat food. The cats like to be fed. Sometimes the cats' water bowl is empty. This is okay. When the water bowl is empty, it is a good idea to put more water in it. I can use the sink in the kitchen.

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### Introduction, Body, Conclusion

- The conclusion restates the original purpose:
  - People can help me look for my toy.
  - Feeding and watering the cats is a good thing to do.



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- A Social Story™ answers relevant "wh" questions:
  - Where does the event take place?
  - When does the event happen?
  - Who is involved in the event?
  - What happens during the event?
  - How are events sequenced?
  - Why does it occur this way?

WH"

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APPENDIX I (continued)

**“WH”**

My family is going to the beach today.

My family (who) is going (what) to the beach (where) today (when).

We'll ride in our car to the beach (how).

Many families have fun when they visit the beach (why).

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**Possible “Wh” Questions to Answer for Zac**

**What?**  
Feeding the cats and dog. Specifically, getting the pitcher for water and the dog and cat food.

**Where?**  
Where are these items located?

**Who?**  
The dog, the cat, parents (can help)

**When?**  
After school.

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**Possible “Wh” Questions to Answer for Zac**

**How?** There are 5 steps involved in the chore:

1. Get the pitcher filled with water (there is one designated for this purpose).
2. Take the water and fill up dog's bowl, then cats' bowl.
3. Get cats' food scoop and put one scoop in both dishes.
4. Get dog's food scoop and put one scoop in dish.
5. Put pitcher back in kitchen. There is a spot designated for the pitcher next to the sink.

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**Possible “Wh” Questions to Answer for Zac**

Why?  
The cats and dog require food.

And...  
It is good for Zac to have an important responsibility!

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**1<sup>st</sup> Person Perspective**

- A Social Story is written from the child’s point of view—as if the child was telling the story.
- My name is Zac.
  - Not: Zac feeds the cats.
- I will try to carefully put food in the cats’ bowl. If some spills, I will try to clean it up.
  - Not: Be careful while... or: Zac, be careful...
- After school, I feed the cats.
  - Not: The cats are supposed...or: After school, Zac should...

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**Positive Language**

- Bring attention to desired behaviors in a situation.
- Wording does not bring anxiety to the child:
  - Do Not:  
“I will try not to yell in the library.”
  - Do:  
“I will *try* to talk quietly in the library.”

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APPENDIX I (continued)

**Positive Language**

For Zac:  
The cats and dog like to be fed.

Feeding the cats and dog is a good thing to do.

I am being responsible when I take care of the pets.

I will try to feed and water the pets after school.

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**Language Usage**

- Stay away from "absolutes":
  - Always—as in *The cat food is always in the bin.*
  - Every—as in *We have recess every day.*

Instead, use alternative language if certain words may be a source of anxiety for the child:

Sometimes  
Usually  
Most days, Most of the time, Most days  
Each school day, Each recess

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**Sentence Types**

Sentences that Describe

Descriptive Sentences are factual statements that are free of opinions and/or assumptions.

Perspective sentences are statements that refer to, or describe a person's internal state, their knowledge/thoughts, feelings, beliefs, opinions, motivation, physical condition/health.

Cooperative Sentences identify what others will do to assist the child.

Affirmative Sentences enhance the meaning of surrounding statements and often express a commonly shared value or opinion within a given culture.

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### Sentence Types

#### Sentences that Direct

Directive Sentences identify a suggested response or choice of response to a situation or concept, gently guiding the child's behavior.

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### Descriptive Sentences

- Only required type of sentence
- Factual statements
- Literally translated
  - My name is Zac.
  - Feeding the cats is my chore.
  - When I feed the cats, I am doing my chore.
  - Usually, the cat food is in the bin.
  - Sometimes, the cat food bin is empty.

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### Perspective Sentences

- Supplies the perspective of others in the story, describe, a person's (not the child's) thoughts, knowledge, feelings, beliefs, opinions, motivation, or physical condition
- My teacher knows about me (knowledge/thoughts)
- Sometimes, my sister likes to play the piano (feelings)
- Some children believe in the Easter Bunny (belief)
- Many adults like calamari (opinion)
- Some children like to earn stickers for helping at clean-up time (motivation)
- Sometimes, people feel sick (physical condition)

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### Cooperative Sentences

- Describe the roles of others in the situation:
  - cues the child as to who will help him or her
- My mom, dad, and teachers will help me as I learn to use the toilet.
- My teacher can show me which page we are on.
- Mom and Dad will try to remain calm while I learn to use the toilet.
- Mom or Dad can help me find the cat food.

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### Affirmative Sentences *(in italics)*

- Most people eat dinner before dessert. *This is a good idea* (stressing an important point)
- I will try to keep my seat belt fastened. *This is very important* (reference to a law)
- One child slides down the water slide at a time. *This is a safe thing to do* (reference to a rule)
- The toilet makes a sound when it flushes. *This is okay* (reassure)

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### Affirmative Sentences

- Let the child know...
  - Usually, toilets are loud. *This is okay.*
  - There are many choices in the cafeteria. *It's good to make choices.*
  - I will try to feed the cats myself. *This is a good thing to do.*
  - The cats will like it if I feed them. *This is an important thing to do.*

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### Directive Sentences

- These are guides, not commands
- These are meant to gently guide the child—to offer choices or supply appropriate responses to a situation or in a specific event
  - I will try to keep the paint on the paper.
  - I may ask Mom or Dad for a hug.
  - I may decide to play on the swings. I may decide to play with something else.

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### Directive Sentences #2

- I will try to get myself dressed.
- I will try to get dressed by myself.
- I will try to tie my own shoes.
- I will try to remain calm.
- I will try to use my nice, inside voice.
- I will try making my bed all by myself.
- I will try (to)...

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### Social Story Formula

- A Social Story™ *describes* more than directs, following the Social Story™ Formula
- Helps avoid making a “to-do” list

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APPENDIX I (continued)

**Social Story Formula**

Sentences that DESCRIBE include:

- Descriptive
- Perspective
- Cooperative
- Affirmative

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**Social Story Formula**

- A Social Story™ describes more than directs, following the Social Story™ Formula
- Sentences that DIRECT:
  - Directive

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**Social Story Formula**

$$\frac{\text{DESCRIBE}}{\text{DIRECT}} \geq 2$$

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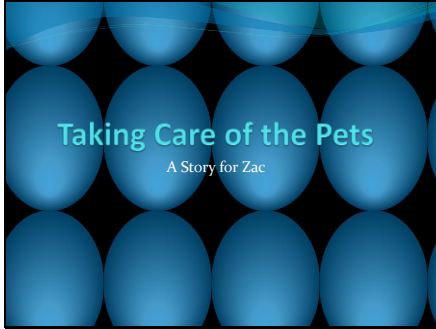
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APPENDIX I (continued)



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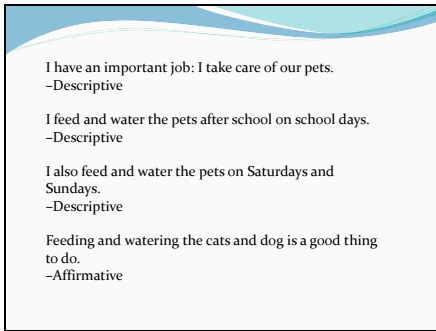
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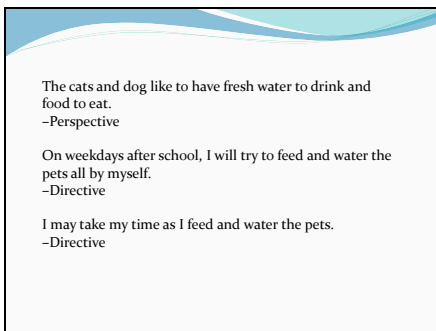
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APPENDIX I (continued)

Sometimes I can't find the water pitcher.  
-Descriptive

This is okay.  
-Affirmative

If I need help, I may ask Mom or Dad for help.  
-Directive

Mom or Dad will calmly help me find the water pitcher.  
-Cooperative

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I will try to remain calm while we find the water pitcher.  
-Directive

Remaining calm is a good thing to do.  
-Affirmative

If the food container is empty, I will try to tell Mom or Dad that there is no more food.  
-Directive

Mom and Dad will like it when I feed and water the pets.  
-Perspective

I may play with the pets after I feed and water them.  
-Directive

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I like to play with the cats and dog.  
-Descriptive

This is a good thing to do.  
-Affirmative

It is good to be responsible.  
-Affirmative

I am being responsible when I take care of the pets.  
-Descriptive

Feeding and watering the pets is my important job.  
-Descriptive

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### Figuring Your Sentence Ratio

- First: count the number of sentences that describe
- Then count the number of sentences that direct
- Divide and we get 2.5

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### A Final Word About the Social Story Formula

- Helps the author identify sentences that are potentially unclear or confusing
  - Some sentences meet the criteria for more than one type of sentence
    - *My mom and dad are calm while I learn to use the toilet.*  
= a perspective and cooperative
- Both are considered *DESCRIBING* sentences so they are in the same category and won't make the equation more difficult to figure ☺

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### A Final Word About the Social Story Formula

Different categories? Now what?  
*I may use the computer.*  
What is the intent?  
Is something being described or directed?  
When it's confusing, the statement needs to be rewritten to clarify its meaning; this catches confusing sentences before a story is reviewed with a child.

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**A Final Word About the Social Story Formula**

Why the Formula Is So Important:

Avoid making  
"to-do" lists  
when writing a  
Social Story™

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**Social Story™ Format**

- Tailored to ability level
- Considers child's interests
- Literally accurate
- General stories *may* be written.
- Usually stories are individualized for a particular child in a particular situation.

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**Social Story™ Format**

- Format = how information is structured & shared with the child
- Tailoring = story length, organization of text, & selection of appropriate sentence structure & vocabulary
  - Child's attention span, need for repetition and predictability, how child interprets the information
  - Developed from an understanding of the child which may help the child to better understand

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APPENDIX I (continued)

**Social Story™ Format**

- Story Length
  - Be brief
  - For young children: 2-12 short sentences
  - Depends on each individual child ☺

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**Organization & Sentence Structure**

- Literal accuracy = "face value"
  - Interpreted literally!!
- Sincere language



Keep in mind:

- If the intended meaning of a word or phrase differs from its literal interpretation, it is not used

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**Organization & Sentence Structure**

- Verb use can be a struggle
- Positive verbs

**Not:** *I will not run in the hall.*

**Positively stated:** *I will try to walk in the hall.*

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APPENDIX I (continued)

**Organization & Sentence Structure**

- Some children demonstrate strong negative emotional reactions to specific words
- Replace words that may cause anxiety

new → better  
different → another  
losing → missing

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**Recap Sentence Structure**

1. Literal accuracy
2. Careful selection of positive verbs
3. Possibility of alternative vocabulary

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**The Social Story™ Title**

(This is a recap also—no new information ☺)

1. Shares information, the topic, or most important point of the Story
2. May pose or announce answers the most important “wh” questions
3. Is written from a 1<sup>st</sup> person perspective
4. Uses positive language or announces something the child currently does well
5. Is easily understood and interesting to the audience

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APPENDIX I (continued)

**Summary!**

A Social Story:

- Meaningfully shares social information with a patient and reassuring quality
- Has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information
- Answers "wh" questions
- Is written from a first person perspective

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**Summary!**

- Uses positive language, omitting descriptions or references to negative behaviors in favor of identifying positive responses
- Always contains descriptive sentences, with an option to include any one or more of the 4 remaining sentence types (perspective, cooperative, directive, or affirmative)
- Describes more than directs, following the Social Story Formula
- Has a format that is tailored to the abilities and interests of its intended audience, and is usually literally accurate
- Has a title that meets all applicable Social Story Criteria

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**Thank You!!**

(We're almost finished!)



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## APPENDIX J

### SCORING CRITERIA FOR PARTICIPANT'S SOCIAL STORIES

#### Social Story Scoring Criteria Using the Social Story Checklist

The Social Story Checklist from Gray's *Social Stories™ 10.0: The New Defining Criteria & Guidelines*:

1. The story has an introduction that clearly identifies the topic, a body that adds detail, and a conclusion that reinforces and summarizes the information.
  - a. Introduction
    - 1 = No relevant topic in introduction
    - 2 = Topic is not mentioned until 3<sup>rd</sup> sentence or later
    - 3 = Topic is mentioned in first 2 sentences, but is unclear or confusing; may contain unnecessary information or inaccurate information (e.g., negative language)
    - 4 = Introduction clearly identifies topic
  - b. Body
    - 1 = Body gives no details or all details are irrelevant/confusing/inappropriate for the task
    - 2 = Inconsistent—gives relevant details mixed with irrelevant/confusing/inappropriate details
    - 3 = All or almost all details are relevant/clear/appropriate
  - c. Conclusion
    - 1 = No conclusion
    - 2 = Conclusion is off-topic (irrelevant/confusing/inappropriate to the task)

APPENDIX J (continued)

3 = Inconsistent—attempts to reinforce and summarize but contains irrelevant/confusing/inaccurate information, which may be confusing

4 = Conclusion reinforces and summarizes with relevant/clear/appropriate information

2. The story provides answers to “wh” questions, describing the setting or context (where), time-related information (when), relevant people (who), important cues (what), basic activities, behaviors, or statements (how), and the reasons or rationale behind them (why).

Write the information that appropriately answers the “wh” question:

Where \_\_\_\_\_

What \_\_\_\_\_

When \_\_\_\_\_

How \_\_\_\_\_

Who \_\_\_\_\_

Why \_\_\_\_\_

1 = No “wh” questions answered OR questions inappropriately addressed—addressing the child instead of the situation

2 = “Wh” questions attempted with half or less incorrectly addressing a “wh” issue

3 = Very well addressed; all attempted “wh” questions were relevant/clear/appropriate, except “why”

4 = Very well addressed; all attempted “wh” questions were relevant/clear/appropriate, including “why” (e.g., responsibility, getting ready/to school on time, importance of going to school dressed, cats and dog need food to live/be healthy)

3. The story is written from a first person perspective, as though the child is describing the event.

APPENDIX J (continued)

1 = Never

2 = Mixed persons

3 = Only first person perspective is used

4. The story uses positive language, omitting descriptions or references to undesirable behaviors in favor of identifying desirable responses.

Supplies appropriate responses (positive language) rather than reference inappropriate responses (negative language).

1 = Never uses positive language and/or references inappropriate behaviors

2 = Uses both positive language and references to negative behaviors

3 = Never uses references to inappropriate behaviors; always uses positive language; has supplied an appropriate response

5. Sentence Accuracy: The story is comprised of descriptive sentences (literally accurate, objective, often observable statements of fact;), with an option of any one or more of the following sentence types: perspective sentences (that describe the thoughts, feelings, and/or beliefs of other people) ; cooperative sentences (to explain what others will do in support of the child); directive sentences (that identify suggested responses or choices of responses to a given situation); and/or affirmative sentences (that enhance the meaning of surrounding statements).

How many of each of the other sentence types are used accurately/inaccurately?

\_\_\_\_\_ descriptive (accurate)

\_\_\_\_\_ perspective (accurate)

\_\_\_\_\_ cooperative (accurate)

APPENDIX J (continued)

\_\_\_\_\_ affirmative (accurate)

\_\_\_\_\_ directive (accurate)

\_\_\_\_\_ statement is both describing and directive

\_\_\_\_\_ statements of opinion (referring to child's opinion)

\_\_\_\_\_ factually inaccurate statements (e.g., "everyone eats breakfast")

\_\_\_\_\_ inappropriate statements

\_\_\_\_\_ total number of sentences per story

6. (If there are inaccurate sentence types, do not figure ratio and score as a "1")

The story follows the Social Story Formula:

Describing Sentences\* divided by Directive Sentences should equal less than or equal to

2: \_\_\_\_\_ / \_\_\_\_\_ = \_\_\_\_\_

\*DESCRIBE (descriptive + perspective + cooperative + affirmative sentences).

If directive sentences are used, use the Social Story Formula to check the ratio.

1 = There are a greater number of directive sentences than describing sentences.

2 = The number of directive sentences is equal to the number of describing sentences.

3 = The number of number of describing sentences divided by the number of directive sentences is greater than or equal to 2.

7. The story matches the ability (e.g., sentence structure/length) and interests of the audience, and is literally accurate.

Ability of the child

1 = Not at all

2 = Some wording is problematic: too advanced or too childish

APPENDIX J (continued)

3 = Wording matches ability

4 = Wording matches ability and interests were incorporated

8. The title of the story meets all applicable Social Story™ criteria.

a. Shares information, the topic or most important point of the Story

1 = No title

2 = Irrelevant topic/too general

3 = Title shares relevant information (topic or important point)

b. May pose or announce answers to the most important “wh” question(s)

1 = Irrelevant “wh” question addressed

2 = Relevant “wh” question addressed

c. Is written from a first or third person perspective

1 = No

2 = Yes

d. Uses positive language or announces something the child currently does well

1 = Uses commanding, directive, or negative references

2 = Uses positive/neutral language

e. Is easily understood and interesting to the audience

1 = Language is too advanced or too childish

2 = Language matches child’s ability

APPENDIX K

EXIT SURVEY FREQUENCY TABLES

Q1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Somewhat	6	40.0	40.0	40.0
Quite a bit	6	40.0	40.0	80.0
Very Much	3	20.0	20.0	100.0
Total	15	100.0	100.0	

Q2

	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	5	33.3	33.3	33.3
Just a little	5	33.3	33.3	66.7
Somewhat	3	20.0	20.0	86.7
Quite a bit	1	6.7	6.7	93.3
Very Much	1	6.7	6.7	100.0
Total	15	100.0	100.0	

Q3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Just a little	1	6.7	6.7	6.7
Somewhat	4	26.7	26.7	33.3
Quite a bit	6	40.0	40.0	73.3
Very Much	4	26.7	26.7	100.0
Total	15	100.0	100.0	

Q4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Somewhat	1	6.7	6.7	6.7
Quite a bit	8	53.3	53.3	60.0
Very Much	6	40.0	40.0	100.0
Total	15	100.0	100.0	

APPENDIX K (continued)

Q5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not at all	9	60.0	60.0	60.0
Just a little	1	6.7	6.7	66.7
Somewhat	3	20.0	20.0	86.7
Very Much	2	13.3	13.3	100.0
Total	15	100.0	100.0	

Q6

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Just a little	3	20.0	20.0	20.0
Somewhat	7	46.7	46.7	66.7
Quite a bit	2	13.3	13.3	80.0
Very Much	3	20.0	20.0	100.0
Total	15	100.0	100.0	

Q7

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not at all	1	6.7	6.7	6.7
Just a little	3	20.0	20.0	26.7
Somewhat	4	26.7	26.7	53.3
Quite a bit	3	20.0	20.0	73.3
Very Much	4	26.7	26.7	100.0
Total	15	100.0	100.0	

Q8

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Just a little	2	13.3	13.3	13.3
Somewhat	3	20.0	20.0	33.3
Quite a bit	3	20.0	20.0	53.3
Very Much	7	46.7	46.7	100.0
Total	15	100.0	100.0	

APPENDIX K (continued)

Q9

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not at all	1	6.7	6.7	6.7
Just a little	4	26.7	26.7	33.3
Somewhat	2	13.3	13.3	46.7
Quite a bit	3	20.0	20.0	66.7
Very Much	5	33.3	33.3	100.0
Total	15	100.0	100.0	

Q10

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Quite a bit	5	33.3	33.3	33.3
Very Much	10	66.7	66.7	100.0
Total	15	100.0	100.0	

Q11

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Somewhat	3	20.0	20.0	20.0
Quite a bit	7	46.7	46.7	66.7
Very Much	5	33.3	33.3	100.0
Total	15	100.0	100.0	

Q12

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not at all	2	13.3	13.3	13.3
Just a little	4	26.7	26.7	40.0
Somewhat	2	13.3	13.3	53.3
Quite a bit	5	33.3	33.3	86.7
Very Much	2	13.3	13.3	100.0
Total	15	100.0	100.0	