



# **The Effect Of Social Stories Intervention On Social Skills Of Children With Autism Spectrum Disorder**

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## **Abstract**

*This study explores whether or not Social Stories Intervention Strategy has positive effects on the social skills of children with autism. Participants were ten children between the ages of five and seven who attended a school for children with developmental disabilities (Tarbya Fekrya ). A pre- post design was used to examine the effectiveness of the social stories Intervention Strategy on the social skills of the target children. Findings from this study indicated the effectiveness of the social stories intervention employed in teaching the target children social skills. On the basis of the findings, the study advocated for the effectiveness of the social stories intervention employed in teaching the target children social skills.*

**Keywords:** Social stories, social skills, Social Stories Intervention Strategy, autism

## **Introduction**

Autism is a disability characterized by impaired social interactions, limited verbal and nonverbal communication, and restricted and repetitive patterns of behavior. Children with autism may not make friends, spend more time alone than with others, and may not develop empathy or other forms of social reciprocity. They may exhibit stereotypical behaviors to the exclusion of all other activities, may engage in echolalia if any speech at all, and may also engage in dangerous behaviors such as aggression or self-injury (Adel Abdulla & Mourad Ali, 2014).

Since Kanner's (1943) early description of autism, there has been considerable research in identification and appropriate interventions for children with autism. Studies that have focused on cognitive and social competencies of children with autism have noticed strengths in visual-perceptual skills (Lincoln, Courchesne, Kilman, Elmasian, & Allen, 1988; Rodgers, 2000; Siegel, Minshew, & Golstein, 1996) and pictographic stimuli (Garretson, Fein, & Waterhouse, 1990). Visual displays of skill sequences, in particular, have helped with skill acquisition of daily living skills (Pierce & Schriebman, 1994; Roberson, Gravel, Valcanten, Maurer, 1992).

Given the unique learning needs of individuals with autism, social stories may provide an effective strategy to improve social competence. Carol Gray, a special education teacher, developed social stories in order to enable individuals with an autistic spectrum disorder to "read, interpret, and respond effectively to their social world" (Gray, 1994, p.5). A social story is a concise narrative about a situation, concept, behavior, or social skill that is written and implemented according to specific guidelines. Social stories are designed to bring predictability to a situation by providing specific and relevant social cues as well as defining the appropriate responses to a social situation. (Adel Abdulla & Mourad Ali, 2014).

### *Social Deficits in Individuals with Autism*

Researchers have identified the need for an increased emphasis on social skill development to promote greater social competence (e.g., Gresham, Sugai, & Horner, 2001; Ogilvy, 1994; Kolb & Hanley-Maxwell, 2002; Korinek & Popp, 1997; Sugai & Lewis, 1996). Although individuals with autism express interest in the social world, their lack of social skills creates lifelong challenges when interacting and communicating with peers and adults (e.g., Church, Alisanki, & Amanullah, 2000). Early on, individuals with autism often avoid being in close proximity with others, even with their parents (Wing, 1997). Individuals may exhibit inappropriate social behaviors, such as talking "at" another person or asking questions but do not use communication (verbal or non-verbal) to direct the attention of

people around them, known as joint attention (Wing, 1997). Wing (1997) reported that many individuals with autism engage in inappropriate or socially embarrassing behavior, such as temper tantrums, aggression, destructiveness, restlessness, screaming, grabbing objects from shop counters, removing clothing in public, and running away, because they lack the understanding of the rules of social behavior.

Due to the fact that social skills are an important aspect of our daily lives, improving social functioning is one of the most important intervention outcomes for individuals with autism (e.g., Jacobson, Mulick, & Green, 1998; Kamps & Tankersley, 1996; Odom, McConnell, & McEvoy, 1992; Ozonoff & Miller, 1995).

### *Social Stories and Social Skills in Individuals with Autism*

Core deficits in autism (functional language and social interaction) not only impede development, but also may lead to social withdrawal, isolation, and behavior problems (Rubin & Clark, 1983; Ollendick, Weist, Borden, & Greene, 1992). Because of this, improving social functioning is one of the most important intervention outcomes for children with autism (Delano & Snell, 2006).

Carol Gray is the director of The Gray Center for Social Learning and Understanding. Gray has served as a teacher for students with ASD for over 22 years. Gray developed Social Stories and Comic Strip Conversations (Gray, 1998). These resources are used worldwide with individuals with ASD. According to Gray, Social Stories are designed to share social information in a way that will be easily understood by the audience. A Social Story describes a situation, skill, or concept in a way that is relevant to the student. Information often given in the stories includes: where and when a situation may take place, who is involved in the situation, and why the particular situation may occur. Gray explains that, in the stories, relevant social cues, perspectives of others, and common responses to the situation are given. The stories may also explain what other people know, feel, or believe; Social Stories can also explain concepts that are abstract and often difficult to understand (Gray).

According to Gray (2011), Social Stories should affirm something the individual does well while teaching the target behavior or skill. The goal of a Social Story should not be to change the individual's behavior, but to improve understanding of social situations that may lead to increased appropriate behavior. According to Gray, the understanding a person gains often promotes self-esteem, can calm and create order in a turbulent situation, promote independence, reduce anxiety, and increase social understanding.

Social skills are complex, and even individuals diagnosed with autism who are high functioning “often experience considerable difficulty with social situations” (Kuoch and Mirenda 2003, p. 219) and tend to have pronounced deficits in comprehension, notably social comprehension (e.g., Goldstein et al. 2001; Lincoln et al. 1988). Undesirable social behaviors in this population, such as poor eye contact or a lack of an awareness of others may hinder individuals diagnosed with autism from actively participating in simple social play or games (American Psychiatric Association 2000, p. 70). Individuals diagnosed with autism do not tend to initiate social contact or play interactively with peers. This may be due to a lack of understanding of social norms. The American Psychiatric Association reports, “Younger individuals may have little or no interest in establishing friendships. Older individuals may have an interest in friendships but lack understanding of the conventions of social interaction” (American Psychiatric Association 2000, p. 70). Thus, if individuals diagnosed with autism were given direct access to social information in a manner that is easily understood and clearly identifies the behavior expected of them, it is hypothesized that they can more successfully engage in social interactions.

A growing body of literature has examined the effectiveness of social stories with individuals with autism. Existing literature showed that social stories were effective in decreasing aggressive behavior (Adams, Gouvousis, Van Lue, & Waldron, 2004; Gray & Garand, 1993; Romano, 2002; Rowe, 1999), increasing appropriate behaviors (Agosta, Graetz, Mastropieri, & Scruggs, 2004; Kuoch & Mirenda, 2003, Smith, 2001), increasing the use of appropriate social skills (Barry & Burley 2004; Hagiwara, 1999; Pettigrew, 1998), increasing greeting behavior and initiation of play activities (Feinberg, 2001), increasing on-task behavior (Brownell, 2002), increasing appropriate meal-eating behavior (Staley, 2001; Adel Abdulla & Amal Mostafa, 2012) and decreasing precursors of tantrum behaviors (Simpson & Myles, 2002).

Collectively, these studies showed that social stories can improve a wide range of behavior among individuals with ASD (Crozier & Sileo, 2005). The purpose of the present study was to examine the extent to which social stories can be used to improve the social skills of ten children with ASD. The primary research question was, what effects will social stories have on social skills of children with autism?.

## **Method**

### *Participants*

Participants were ten children between the ages of five and seven who attended a school for children with developmental disabilities(Tarbya Fekrya ).All children attended the same classroom within the school. Parental informed consent forms were sent home by the school director and school psychologist to parents of potential participants telling them about the study and requesting them to give permission for their children to participate. Through a previous comprehensive psychological evaluation each targeted child had received a primary diagnosis of Autistic Disorder. All children were also capable of communication using speech assessed through a combination of teacher report and observation. They were so-called high functioning.

Each child also had the following characteristics: (a) meet the full criteria for autism according to The Scale for Screening Autism Disorder(Mohammed, 2003) (b) functional verbal communication, (c) able to read and comprehend words, and (d) ability to follow directions.

### *Dependent Measure*

*Social Skills Scale*(Logsdon, 2012). The *Social Skills* scale includes 34 items on three subscales: (a) social cooperation, (b)social interaction, and (c) social independence. Internal consistency reliabilities ranged from .96 to .97 for the two scale totals and from .81 to .95 for the subscales.

### *Independent Variable*

The independent variable was the use of individualized social stories. As noted, social stories are short written and pictorial vignettes that are used to help students with ASD behave more appropriately and independently. Typically, these stories are written using individuals' specific behaviors and contextual variables as the source of story content. They then use these stories interactively with pupils to improve those particular behaviors in specific contextual situations. Social stories are created using three different sentence types (descriptive, directive, and perspective) that give students information about what is happening, how to behave and how others feel or think about their behavior. Picture cues (e.g., drawings, photographs, or even stick figures) are also used to enhance pupil understanding. Typically,

social stories are created using a variety of formats including: (a) illustrations, (b) photographs, (c) symbols (e.g., Picture Exchange Communication System), (d) audio and video-tape, and (e) story boxes. To create social stories, the investigator met initially with the classroom teacher to identify specific target behaviors. Support teacher then photographed children while they were engaged in socially appropriate and inappropriate target behaviors. The investigator then created stories for the four target students using the three primary sentence types. Support teacher was then trained to use social stories. The investigator created each social story based on individual pupil needs. Social stories were read to target children. social stories can be seen in (Appendix B).

### *Procedure*

Social Skills level of each child was measured on The Social Skills Scale. The assessment was done in an environment familiar to the children and during their usual intervention time. Treatment consisted of social skills training using social stories. The pretest scores were analyzed to ensure parity among the children.

Each child in the treatment group received 14 teaching sessions. The duration of each session would be from 15 minutes to 20 minutes, depending on child's capacity. While treatment group children received social skills training using social stories, the control group continued with usual special classroom interventions. At the completion of the treatment session, children from both groups were tested again on The Social Skills Scale.

## **Results**

### *Social stories and development of social skills*

The first objective of the study was to determine if use of social stories would be more effective for the treatment group compared to the control group. For this purpose, the post intervention scores of both treatment and control groups were analyzed. Table 1. shows Z Value results for the differences in post- test mean rank scores between experimental and control groups in social skills scale. The table shows that (Z) values were(-2.739)for social cooperation,(-2.660)for social interaction, (-2.668)for social independence, and (-2.635)for the composite score. These values are significant at the level (0.01) in the favor of experimental group.

Table 1. Z Values results for the differences in post- test mean rank scores between experimental and control groups in social skills

<b>Variables</b>	<b>Groups</b>	<b>N</b>	<b>Mean Ranks</b>	<b>Sum Ranks</b>	<b>Mann-whitney</b>	<b>Z Value</b>	<b>Sig</b>
social cooperation	Ex	5	8	40	Zero	-2.739	0.01
	Cont.	5	3	15			
social interaction	Ex	5	8	40	Zero	-2.660	0.01
	Cont.	5	3	15			
social independence	Ex	5	8	40	Zero	-2.668	0.01
	Cont.	5	3	15			
Composite	Ex	5	8	40	Zero	-2.635	0.01
	Cont.	5	3	15			

The second objective of the study was to determine the effect of social stories on the development of social skills in children with autism. The treatment consisted of social skills training through use of social stories. The children's performance on social skills was

measured pre and post intervention. Table 2. shows Z Value results for the differences in post- test mean rank scores between experimental and control groups in social skills scale. The table shows that (Z) values were(-2.041)for social cooperation,(-2.060)for social interaction, (-2.032)for social independence, and (-2.060)for the composite score. These values are significant at the level (0.01) .This indicates that use of social stories had a positive effect on development of social skills in children with autism.

Table 2. *Z Values results for the comparison of mean rank scores of experimental group at pre- and post intervention in social skills*

Variables	Negative Ranks		Positive Ranks		Z Value	Sig.
	Mean	Sum	Mean	Sum		
social cooperation	3	15	Zero	Zero	-2.041	0.01
social interaction	3	15	Zero	Zero	-2.060	0.01
social independence	3	15	Zero	Zero	-2.032	0.01
Composite	3	15	Zero	Zero	-2.060	0.01

## Discussion

The present study evaluated the effects of social stories intervention on the social skills of children with autism. The study results showed that the social story intervention was effective in increasing social cooperation, social interaction and social independence of all children participated in this study. The social stories developed for the study were written according to the Gray's guidelines (1993).

The present study contributes in several ways to the effectiveness of social story literature. First, findings from this study demonstrate the potential benefits of using the social story intervention as the sole intervention to increase the social skills of children with autism. The results of this study were similar to those found previously for children with autism populations (Adel Abdulla & Amal Mostapha, 2012; Barry & Burley, 2004; Thiermann & Golstein, 2001). Second, pre- post experimental design was used in the present study. Many studies on the effectiveness of social stories have used nonexperimental designs that are plagued by threats to internal and external validity (Kuoch and Mirenda, 2003; Reynhout and Carter, 2006). Furthermore, the children in this study did not receive any type of reinforcement or behavior modification strategies while participating in the sessions. Removing strategies such as prompting techniques, token systems, and other reinforcement systems reduced the potential for confounds within the study. Therefore, one can conclude that the social story intervention was primarily responsible for the change in the social skills of children participated in the study.

In summary, social stories effectively increased the social skills of the children who participated in this study. Overall, results from this study contribute to the social story literature for improving the social skills of children with autism. The present study lends empirical support to the notion that children with autism, specifically young children with autism, can be taught and can learn appropriate social skills.

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