

Social Narrative Strategies to Support Children with Autism Spectrum Disorder

Christan Grygas Coogle¹ · Siddiq Ahmed¹ · Mohammed Abdulaziz Aljaffal¹ ·
Manal Yousef Alsheef¹ · Hamad Ali Hamdi¹

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Abstract The purpose of this manuscript is to identify social narrative strategies that can be used to enhance the social skills of young children identified with autism spectrum disorder. We provide a description as well as scenarios describing how educators might consider using social narrative strategies. We conclude with resources to attain additional information.

Keywords Autism spectrum disorder · Social narratives · Inclusive education

Introduction

Mr. Mohammed, Ms. Johnson, Ms. Santiago, and Ms. Rollins are all preschool teachers in different schools facing similar challenges. They are all unsure of how to meet the needs of one of the children in each of their classrooms. For example, Ali is student in Mr. Mohammed's class diagnosed with autism spectrum disorder (ASD); Ali is experiencing challenges related to initiating play with his peers. Although Ali uses several one to two word phrases and engages in parallel play, he is not using his words to initiate social interactions. Sally is a student in Ms. Johnson's class also identified with ASD. She engages in parallel play, but is different from Ali. Sally uses some language during play; however, she is not currently responding to a peer when asked to play. Juan

in Ms. Santiago's classroom is not using any words at this time and is not interacting with peers at all which makes it extremely challenging for Ms. Santiago to identify ways to engage him with his peers. Rocco, a student in Ms. Rollins' class, is extremely interested in Mickey Mouse, and most of the communication Rocco uses are phrases which he has heard from the show. This makes it difficult for him to effectively engage with his peers. Mr. Mohammed, Ms. Johnson, Ms. Santiago, and Ms. Rollins are all concerned as they understand the importance of social skill development, yet, Ali, Sally, Juan, and Rocco are one of 18 children in each of their classrooms, and their teachers are uncertain of how they can meet the needs of these students while also meeting the needs of the other 17 children in their classrooms.

The challenges that these four teachers are facing are familiar to many other teachers who work with children with disabilities, including children with ASD (Busby et al. 2012). One in 68 children are diagnosed with ASD and are frequently receiving special education services in an inclusive classroom due to the mandates associated with the Individuals with Disabilities Education Act (Center for Disease Control 2014; Individuals with Disabilities Education Act 2004; Koegel et al. 2012). Additionally, children with disabilities, including ASD, benefit from receiving services and interacting socially with peers in an inclusive environment (Busby et al. 2012). Thus, delivering evidence-based practices to meet the needs of children with ASD in the inclusive environment is particularly important (Connor 2000). One of the core deficit areas of children identified with ASD is social skills. Without intervention to enhance social skills and language use, this common characteristic of children on the autism spectrum can have life-long implications (Sani Bozkur and Vuran 2014). One evidence-based practice associated with positive social outcomes for children with ASD

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✉ Christan Grygas Coogle
ccoogle@gmu.edu

¹ Duquesne University, Pittsburgh, USA

ages three through 18 years of age is the use of social narratives (Wong et al. 2014).

Social narratives can be defined as a written story that is created to assist individuals with ASD in understanding a specific social situation (Gray 2010). Social narratives increase the understanding of social situations resulting in more appropriate behaviors particularly for children with ASD (Wong et al. 2014). In order to successfully implement social narratives, the team of individuals working with a child with ASD should be identified (i.e., parents, caregivers, teachers, related service personnel) and should work together to identify the target skills they feel are important for the child to attain. Then the team should identify team member's roles regarding who will design and deliver the social narrative(s) and when they will do so. Finally, the team should determine how they will collect data regarding the implementation of the social narrative and child outcomes associated with delivery of the social narrative. Therefore, it is important for the team to have a plan in place to ensure that the intervention is delivered with fidelity, and to determine the child outcomes associated with the intervention.

To begin, each of the teachers meets with the individuals who have a key role in the students' lives. For Ali these are his parents, grandparents, and speech language pathologist (identify team members). In order to most effectively utilize social narratives, the team should identify target skills, team roles, and data collection methods. They discuss Ali's strengths. For example, Mr. Mohammed shares that he has noticed that Ali frequently paces back and forth around the classroom as opposed to engaging in any activities with peers. The team agrees that one of the target skills they have for Ali is for him to begin playing with peers. Therefore, Mr. Mohammed and the team identified, "Initiating play through a verbal request" as an appropriate target skill for Ali to work toward (identify target skills). The team has decided that Mr. Mohammed and Ali's father will both be responsible for creating social narratives for the home and school environment, and all team members will be responsible for delivering the social narrative during choice activities when peers are present (identify roles). The team member who is responsible for delivering the social narrative will also collect fidelity and child outcome data. Team members will collect data by using a checklist developed by Mr. Mohammed that Ali will take with him to all environments. On the checklist, the appropriate team member in each setting will identify if they read the social narrative by checking yes or no, and they will identify Ali's progress using a progress monitoring form (data collection). To ensure fidelity, Ms. Johnson, Ms. Santiago, and Ms. Rollins go through a similar process by identifying team members, specifying target skills, establishing roles, and gathering data for Sally, Juan, and Rocco as well.

Ms. Johnson has worked with the team to identify an appropriate skill for Sally which is: "respond with words to peers when asked to play". Both Sally's mother and Ms. Johnson will create and deliver the social narrative. They will utilize a checklist to collect progress monitoring and fidelity data.

Ms. Santiago works with the team to identify an appropriate skill for Juan which will be use assistive technology to greet a peer. Ms. Santiago and Juan's grandmother will develop the social narrative together. Both will implement the strategy as well as collect data across settings which are appropriate for each of them (Ms. Santiago in the classroom and Juan's grandmother at home).

Finally, Ms. Rollins and Rocco's team has identified using functional words throughout typical activities and routines. Ms. Rollins will work with Rocco's mother and nanny to develop the social narrative. Ms. Rollins, Rocco's mother, and Rocco's nanny will all be responsible for delivering the social narrative across settings, and each will collect data in the setting which they are the primary caregiver (Ms. Rollins at school, Rocco's mother on weekends and evenings, and Rocco's nanny during the afternoon) (Table 1).

Social narratives can be used as a tool to assist team members in supporting children with ASD to acquire target skills. Social narratives can be presented using a variety of strategies including: *comic strips and cartooning*, *social scripts*, *SMART board*, and *power cards*. When delivering any intervention or strategy it is also important to collect progress monitoring and fidelity of implementation data. Progress monitoring data allows the team to determine the child's response to an intervention as well as determine next instructional steps (Reddy and Dudek 2014). Fidelity of implementation data allows the team to determine if the intervention or strategy was delivered as it was intended (Missett and Foster 2015; Cook and Odom 2013) (Tables 2, 3). The next part of this article add to the existing literature on social narrative strategies, explains how these strategies can be used in inclusive classrooms, and illustrates how to collect data. We conclude with resources for teachers and other team members (i.e., caregivers, related service personnel, peers) in their use of strategies to support children with ASD in acquiring social skills (see Tables and Supplementary Material 1).

Comic Strips and Cartooning

One social narrative strategy is comic strips and cartoons (see Supplementary Material 2). Comic strips and cartoons provide a visual representation of a social situation. Comic strips and cartoons are more appropriate than lengthier social narratives for young children as they include symbols and a briefer narrative (Glaeser et al. 2003). Children with limited verbal skills benefit from more visuals, and

Table 1 Student characteristics

Student name	Characteristics	Target social skill	Practice opportunities	Supports needed
Ali	Uses one to two word phrases	Initiate play using a verbal request	Choice time	Comic strips
	Parallel play		Outside play	Verbal prompts
	Non-responsive to others			
Sally	Uses several words	Respond to peers using words	Choice time	Social script
	Parallel play		Outside play	Verbal prompt
	Not responsive to others		Morning meeting	
Juan	Nonverbal	Use assistive technology to greet a peer	Arrival	SMART Board
	Isolated play		Morning meeting	Hand over hand assistance
	Non-responsive to others			Verbal prompt
Rocco	Verbal (specific to interests)	Use functional words within play activities	Choice time	Power card
	Parallel play		Outside play	Verbal prompt
	Responsive to others			

Table 2 Progress monitoring system

Student name: Ali	Intervention/ strategy: Comic strips	Interventionist: Teacher	Date: September 1, 2017
Routines	Mastered with no supports	Mastered with social narrative	Mastered with social narrative and supports (i.e., prompt, model, hand over hand)
Routine 1: choice time		Upon reading the social narrative Ali approached friends and said, “Play please”	
Routine 2: outside play			Upon reading the social narrative, teacher supported Ali by providing a verbal prompt to say, “Play please.”

Table 3 Fidelity of implementation system

Student name: Ali	Interventionist: Teacher	Setting: Classroom	Date: September 1, 2017
Target intervention/strategy: social narrative			
	Strategy delivered		Support delivered upon use of social narrative
			Notes
Routine 1: choice time	Y	N NA Y	N NA Delivered narrative and support in classroom
Routine 2: outside Play	Y	N NA Y	N NA Delivered narrative and support on play-ground
Total y divided by y plus no = 4/4, total: 100%			

Y refers to yes the strategy was delivered, no indicates the strategy was not delivered and NA represents that it was a situation in which it was not applicable

therefore, comic strips and cartoons are an appropriate form of social narrative (Glaeser et al. 2003). In social situations, the teacher and/or team member can use comic strips and cartoons to help the child understand situations, phrases, or emotions. The child can take a key role

in developing the comic strip and cartoons as well (Vivian et al. 2012). Researchers have indicated that comic strips and cartoons are useful because they are inexpensive and easy to implement (Glaeser et al. 2003).

Mr. Mohammed recognized choice time as an opportunity to practice initiating play with peers. He decided to utilize the comic strip and cartoon strategy because Ali enjoys art and has limited literacy skills for his age. Mr. Mohammed begins by folding a piece of paper into four parts that created frames or boxes in which a drawing could be inserted. Then he stated, “Ali, let’s draw how we can ask to play.” Mr. Mohammed drew the peers playing in the block center in the first frame since this appeared to be the area of the room which Ali was interested. Then Mr. Mohammed stated, “Let’s draw a way to play with friends.” Mr. Mohammed continued by drawing Ali walking over to his peers in the block area in the second section. In the third frame, Mr. Mohammed drew Ali asking to play with a communicative bubble that said, “play please”, and in the last box of the cartoon strip, Mr. Mohammed drew a peer providing Ali with the desired materials (blocks), and the peer saying, “Sure.” Then Mr. Mohammed said to Ali, “When you would like to play you can say ‘play please.’” Upon reading the comic, Mr. Mohammed cued Ali to walk toward his friends by saying, “Let’s go play.” They walked over to a group of peers together, and Mr. Mohammed prompted Ali by saying, “Say, play please.” When Ali did not respond, Mr. Mohammed modeled by saying, “Play please” and helping Ali join in play. After this interaction, Mr. Mohammed indicated that Ali is progressing with social narrative, prompt and model as he did not yet spontaneously say, “Play please.” As Mr. Mohammed continued to utilize this process each day, he noticed on the 7th day Ali said, “Play please” without Mr. Mohammed modeling. At this point, Mr. Mohammed indicated that Ali mastered saying, “Play please” with a verbal prompt and social narrative on his progress monitoring form. Eventually, Mr. Mohammed described that Ali mastered his target skill with narrative and without prompt when Ali no longer needed a verbal prompt of what to say. Then later, he noticed that Ali began to walk over to his friends spontaneously without any support and say, “Play please.” At this point, Mr. Mohammed described that Ali mastered the task without social narrative and prompt on his progress monitoring form. Each time Mr. Mohammed and Ali’s father delivered the social narrative in the activities and routines the team identified (i.e., choice time and outside play) they also completed a fidelity of implementation checklist by circling yes (when appropriate) allowing the team to see that the strategy was delivered with fidelity because they knew it was important to ensure the intervention process was delivered as intended prior to determining whether or not it was effective.

Social Scripts

Social scripts are similar to comics as they support children with ASD in acquiring an appropriate response to a social situation. Social scripts often strengthen social interaction

skills of children with ASD as they provide a model to these children in responding more appropriately to others (Kamps et al. 2002). Social scripts are different from comic strips and cartoons as they may contain more words and less pictures (see Supplementary Material 3).

Ms. Johnson decided to create a social script to help Sally respond to peers. Ms. Johnson has chosen this method because Sally is beginning to read, and because she has many words. Ms. Johnson wrote a social script in language that was familiar to Sally. Ms. Johnson reads the social script to Sally in the classroom prior to choice time every day, “Sometimes friends might ask me to play by saying, ‘Sally do you want to play with us?’ I will respond by looking at them and saying ‘yes please or no thank you.’” Reading the social script before choice time will serve as a model of how Sally can appropriately respond to her peers. Ms. Johnson decides to stay near Sally and prompts a peer to ask her to play so that she has an opportunity to support Sally in responding to a peer. When Sally’s peer asks her to play, Sally initially appears as though she does not hear her friend. Ms. Johnson prompts Sally by saying, “Sally, Joey asked you to play. You can say ‘yes please’ or no thank you’?” Sally says, “Yes please” and Joey and Sally begin to build with Legos together. Upon this interaction concluding, Ms. Johnson indicates that Sally is progressing with social narrative and verbal prompt on her progress monitoring form as Sally needed both the narrative and prompt to practice the skill, responding. Initially, Sally needs Ms. Johnson to prompt her; however, Ms. Johnson notices that Sally eventually begins to respond to her peers without a prompt, and at this point Ms. Johnson indicates ‘mastered with narrative and without verbal prompt’ on her progress monitoring form. Eventually Sally begins responding to peers regularly, and Ms. Johnson observes Sally responding in settings where she has not utilized the social narrative. Ms. Johnson writes: ‘Mastered without social narrative and without verbal prompt’. Each time Ms. Johnson and Sally’s mother delivered the social narrative and provides the appropriate support needed (i.e., verbal prompt) they identify yes on the fidelity of implementation data form to demonstrate to the team that each of them implemented this strategy with fidelity or as intended.

SMART Board

Since individuals with ASD tend to be visual learners, a SMART Board provides an opportunity to help them engage in an interactive learning environment. Combining two methods (social narrative and SMART Board) enhances the opportunity for children opposed to capability of the children with ASD to facilitate their learning and understanding in a particular social situation (Xin and Sutman 2011). When utilizing a SMART Board to present a social narrative, the educator creates a PowerPoint, which includes descriptive

sentences and photographs of the appropriate behavior. The child is encouraged to touch the screen and circle the pictures or words he/she likes with taking in consideration presenting one sentence of the narrative on each slide (Xin, and Sutman 2011).

Ms. Santiago decided to use a SMART Board and social narrative, which allowed Juan to be more engaged in the narrative as Juan has appeared to be more interested in using technology enhanced instruction. Ms. Santiago designs a social narrative about Juan greeting a peer using his Communication Button (see Supplementary Material 1). In this social narrative, Ms. Santiago includes some descriptive sentences about how Juan will arrive at school, a teacher or friend will say, “Hello,” then he will push his communication button which will help him say, “Hello.” Upon completion of the social narrative, Ms. Santiago practices with Juan by saying, “Hello,” handing Juan his communication button, and using hand over hand assistance by placing his hand on the button and pushing the button in order to create a response. Ms. Santiago observes that Juan begins to spontaneously use his communication button when peers say hello when he arrives at school. Upon each interaction, Ms. Santiago and Juan’s grandmother complete the child progress monitoring form as well as the team’s fidelity of implementation form to demonstrate child progress and strategy fidelity.

Power Card

Power Cards use a visual aid based on the child’s special interest to increase appropriate social initiations and other prosocial behaviors (Gagnon 2002). Power Cards incorporate a written narrative that prescribes appropriate behavior in a situation that is problematic for the child. Power Cards are unique as they include a special interest character or hero printed on one side of the card to provide motivation for the prescribed behavior. The social script on the Power Card is typically read to the child prior to the problematic social situation. There are several potential advantages of the Power Card strategy. Power Cards typically have a short narrative and they are small in size, and therefore they can be transported more easily between locations than social stories, which are printed on multiple pages (e.g., Chan et al. 2011). Second, because Power Cards are small and portable, they may be used as cues to occasion appropriate behavior while the child is engaged in an activity; in some cases, children may continue to rely on the card to cue appropriate behavior following initial intervention (Campbell and Tincani 2011). The Power Card may be written ambiguously to make it easier for children to generalize target skills across settings, activities, and people, whereas social stories follow a prescribed format with a specific ratio of sentences. Lastly, the Power Card is small and can be used discretely.

Because Rocco likes Mickey Mouse, Ms. Rollins uses the Power Card technique to create a social narrative related to initiating a peer interaction using functional words. The following is an example of a Power Card focused on something particularly interesting to Rocco: Mickey Mouse.

Mickey Mouse Plays with Friends

Mickey Mouse loves to play with friends, but sometimes it is difficult for him know how to play with friends. However, Mickey has learned that it is important to use words that others understand. He has learned that when he uses these words people understand him and play with him.

Just like Mickey, it is important to use our words. It makes Mickey proud when friends remember to do the following:

1. Look around the room and make a choice.
2. Walk over to your peers.
3. Say, “Play please.”
4. When you do not know the words, or feel frustrated ask the teacher for help.

Because Rocco is quite verbal, upon receiving a prompt from Ms. Rollins (“Remember the words we use to ask to play”), he begins using play please within days of reviewing his power card. Eventually, he no longer needs his power card and can begin to receive power cards which identify other skills which the team identifies important for Rocco. Ms. Rollins as well as Rocco’s mom and nanny complete Rocco’s progress monitoring checklist as well as each of their fidelity of implementation form to demonstrate both Rocco’s progress and that the strategy was delivered with fidelity using the appropriate supports provided.

Conclusion

In summary, social narratives are an evidence-based practice to enhance the social skills of individuals identified with ASD. When considering social narratives, it is important to identify target skills, team member roles, and data collection methods which the team will utilize to support the child to acquire skills. It is also critical to think about the individual with ASD, and developmental level and learning style to determine which social narrative strategy would be most appropriate. Social narrative strategies is a practice which teachers might consider to support them in delivering services to children with ASD within inclusive environments (Table 4).

Table 4 Social narrative resources

Topic	Resource location	Description
Comics	https://www.storyboardthat.com/storyboard-creator	Provides templates to create comic strips Pros: efficiently create for any situation Cons: time to develop
Power cards	http://www4.smsd.org/autism/html112764.htm http://www.ocali.org/project/resource_gallery_of_interventions/page/power_cards	Provides sample power cards and templates Pros: student interest centered Cons: time to create
Cartooning	http://www.ocali.org/project/resource_gallery_of_interventions/page/cartooning	Provides sample cartoons and cartoon template Pros: student interest centered Cons: time to create
Smart board	http://exchange.smarttech.com/#tab=0	Website where teachers can exchange smartboard lessons including social skills lessons Pros: technology enhanced, student interest centered Cons: requires technology resources
Social narratives	http://afirm.fpg.unc.edu/social-narratives http://afirm.fpg.unc.edu/social-narratives http://www.autisminternetmodules.org/user_mod.php http://carolgraysocialstories.com/about-2/carol-gray/	Resources to learn more about social narratives

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