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Children's Responses to A Social Story Song
in Three Inclusive Preschool Classrooms: A Pilot Study

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Abstract

The social story is a pedagogical strategy presented individually, often in print, to primary grade children with autism. Authors examined teachers' perceptions of the effect of a social story song adapted for preschoolers in six inclusive classes. A board certified music therapist composed a social story song set to a familiar melody about waiting, a behavior of significant concern for preschool teachers teaching on a military post. Teachers, trained by the music therapist, implemented the social story song within each of their part-day, multi-age classrooms for five weeks. Results of this pilot suggest teachers perceived the training to be sufficient for immediate use and the song effective in modifying behavior in both exceptionally and typically developing children when either the teacher or children initiated it. Social story songs for preliterate children may be an effective intervention strategy to support behavior change within inclusive preschool settings.

Key Words: early childhood education; military families; inclusion; social story songs; music therapy; preschool; autism

Children's responses to a social story song
in three inclusive preschool classrooms: A pilot study

The goal of early intervention is to develop the skills within a child that allow him or her to function successfully with the greatest degree of independence within his or her context (National Research Council, 2001). The musical adaptation of social stories into what are known as "social story songs" (Davis, Gfeller, & Thaut, 2008), are "...designed to teach children with autism spectrum disorders to identify and respond appropriately to social cues in a wide variety of situations and environments" (Reynhout & Carter, 2007, p. 173). A social story song contains analysis of a social situation commonly experienced by a child and presents the desired behavior in a step-by-step process. Social story are frequently written on cards and read but may be presented in other forms (Brownell, 2002; Reynhout & Carter, 2007; Sansosti, Powell-Smith, & Kincaid, 2004). Targeted social skills might be chair tipping, inappropriate staring, and shouting during class (Scattone, Wilczynski, Edwards, & Rabian, 2002), violent or aggressive acts, difficulty in following directions, and a loud voice at inappropriate times (Brownell, 2002). Researchers have examined the design and efficacy of social story songs for school-age children with autism spectrum disorders (Sansosti, et al., 2004; Scattone, et al., 2002). More recently, researchers have examined the relationship between social story songs and behaviors among preschoolers (Kern & Aldridge, 2006; Kern, Wakeford, & Aldridge, 2007).

Drawing upon Vygotsky's socio-cultural theory of development, social story songs use language as a "cultural tool" to mediate behavior and intra-mental processes (Wertsch & Tulviste, 1992). Child development cannot be separated from its context and is mediated by cultural symbols. Language is a major symbol system guiding thinking and self-regulation. For the young child, language appears as "private speech" spoken out loud as a child narrates his or her own behaviors. A child's thinking is represented by the words he or she uses. Gradually, language is internalized ("inner speech") and he or she no longer needs to verbalize aloud. The child plans and regulates his or her actions with language (Wertsch & Tulviste, 1992). Social story songs may be a developmentally appropriate tool for the young child who is learning both language and pro-social skills. It is a direct, intentional method to provide the symbols (spoken words) for a child to regulate both his behavior and thinking. Demonstrating appropriate social and emotional behaviors are fundamental developmental competencies learned during early childhood among all children (Center on the Social and Emotional Foundations for Early Learning [CSEFEL], 2012; Copple & Bredekamp, 2009; Sandall, McClean, & Smith, 2000).

Current research literature includes music as a tool for acquiring and retaining information and changing behavior. Few studies, however, address these goals using social story songs, and often research is conducted with individual children or small groups. Pasiali (2004) discussed a design and protocol for the use of "prescriptive therapeutic songs" to shape the social behavior of three children with autism. Pasiali created an original song for each

child, designed to “decrease an undesirable behavior identified by the parent” (p. 11) and developed the lyrics for each song following the current guidelines for writing social stories. Lyrics were set to a familiar tune in a technique known as “piggybacking.” Pasiali reported that although results were not statistically significant, “the implementation of the prescriptive song protocol was successful in reducing the target behavior of each participant” (p.17). She suggested further research should focus on a more precise scientific model and a group comparison design, but questioned the feasibility of creating songs that might apply to a larger group.

In a similar study, Brownell (2002) used “musically adapted social stories” with four children with autism. Brownell proposed about social story songs that “this type of intervention may promote repetitions of the story, increase cooperation during the intervention, and provide an avenue for recall of the information contained within the social story, resulting in increased social skills and appropriate behavior” (p.125). Results comparing read and sung presentations revealed that each child experienced a decline in socially unacceptable behavior in both conditions, significantly less than baseline, and, in all cases, fewer negative social behaviors were observed after the musical condition. Brownell concluded that musical adaptations can be at least as effective as the traditional model.

Researchers have examined the influence of music on the behavior of both individual students and a small group of students within a classroom setting. Kern and Aldridge (2006) sought to improve peer interaction and increase

meaningful play on the playground for four children with autism attending an integrated child care program by developing songs for each child addressing targeted social skills. Both teachers and “peer buddies” were trained to implement the protocol. The authors concluded that “the composed songs unique to each target child incorporating specific therapeutic goals produced desirable outcomes,” and that their findings support “the clinical application of songs for skill development in early childhood settings” (p. 289). Other key findings suggested that “individualized interventions based on music therapy principles can be embedded by teachers,” and that “with only one exception, the teachers’ accuracy in implementing the intervention was very high, as evidenced by the procedural fidelity data” (p. 289). Kern and Aldridge concluded that peer-mediated strategies were also “effective in increasing peer interactions and meaningful play” and that the songs “facilitated social involvement between the peers and the children with autism” (p. 290).

In a separate study Kern, Wakeford, and Aldridge (2007) used music-therapist designed, teacher implemented songs to teach a student with autism three common multi-step self-care tasks in a preschool classroom. Both originally composed and piggyback songs were created to teach the child the sequence of tasks in each routine. Kern and colleagues compared effectiveness of musical versus verbal presentations. Results indicated that song interventions were more effective than verbal interventions for some daily living activities and that familiar melodies were more effective than the verbal and the original compositions, a result consistent with findings by Wolfe and Hom (1993).

Together the results of these studies offer evidence that both singing and the use of familiar tunes may promote learning.

Kern, Wolery, and Aldridge (2007) investigated song cues embedded into classroom routines to shape behavior for two children with autism in an inclusive preschool setting. The authors examined the effectiveness of songs composed for the individual child on increasing independent behaviors during morning greeting routines. Teachers, trained by the music therapist, prompted desired behaviors when entering the classroom by singing a song which conveyed the sequence of a five-step greeting routine. Results indicated the songs were successful in engaging children appropriately during the greeting routine and, for one child, the number of peers who greeted him increased. Additionally, the finding “replicates and extends earlier studies showing that classroom teachers can embed [musical] intervention strategies successfully into ongoing routines, when training and monitoring were provided” (p. 1269) and suggests further studies on songs to promote other skills are warranted.

While much of research to date focuses on case study interventions of preschoolers with autism, one study examined the relationship between music and the behavior of children with a range of disabilities as well as typically developing in an inclusive classroom. Register and Humpal (2007) composed original songs to decrease time and negative behaviors during transitions among 4-year-olds in an inclusive prekindergarten early intervention classroom. Researchers hypothesized that negative behaviors would decrease for all children if they were prepared for transitions with the use of a sung cue. Three

classrooms were provided with song cues, and in each case, “music seemed to effectively help children transition more quickly within the organization of the school day” (p. 25). Music therapists provided the sung prompts, but researchers suggested that this technique could be implemented by the teacher and recommended “developing a protocol and written materials for teachers and staff that can be clinically tested for efficacy” (p. 30).

There is potential for an overall improvement of service when music therapists consult and collaborate with other service professionals such as classroom teachers, as it “provides continuity of service and a greater understanding of holistic intervention as no issue is completely isolated. Transfer of learning among professionals and individuals receiving interventions results in a multitude of benefits for all parties...” (Register, 2002, p. 310). Furthermore, Register suggests that music therapists are particularly suited for consulting and collaborating with other service professionals because of the inclusive nature of their educational program, their training with diverse populations, and their approach to addressing, as a whole, the psychological, physical, and social needs of the client and his or her family.

The purpose of this pilot study was to test a protocol for training early childhood teachers to use social story songs created by a music therapist within their inclusive preschool classrooms with groups of children. Two questions guided this research: a) To what extent are early childhood teachers able to integrate a protocol for a social story song after one training session by a music therapist, and b) Do teachers perceive the intervention to be effective in the

inclusive classroom both with preschoolers typically developing as well as those with diverse developmental exceptionalities?

Method

Participants and Setting

Teachers. Three early childhood teachers with inclusive part-day classes in a Midwestern public school district on a military installation participated in this preliminary study. All were female, state licensed teachers; one had a master's degree in early childhood education. Teaching experience with preschoolers in inclusive programs ranged from 5.5 years to 15.5 years. In addition to the lead teacher, each classroom had three female para-educators to assist in instruction.

Children. The children were 3- to 5-years old and predominantly male: 10 boys in each class in the morning sessions and 8 in each afternoon session. Eight children in each morning session and six or seven children in each afternoon session had an identified disability including autism, Down syndrome, reactive attachment disorder, and speech delay. Five to seven typically developing peer models were in each class. Children with disabilities consistently outnumbered peer models.

Setting. Enrollment in each of the three classrooms included a 3-hour morning class and a 3-hour afternoon class, Monday through Thursday ($N = 6$ classes total). The number of children varied between classes (11 to 15 children) as well as within each class over the course of the study as a consequence of the highly mobile military lifestyle. The teachers reported that all children but one had at least one parent on active duty. Children enter and leave the programs

frequently in response to a parent's deployment, training, or transfer. Although the initial research design was to follow individual children over time, the highly transient nature of attendance made this unfeasible; thus, the focus for this pilot study was modified to examine teachers' perceptions of training on social story songs by a music therapist and children's responsiveness.

Intervention

Social story song. One social story song was developed for this study. A board certified music therapist, trained in the Social Story™ technique developed by Carol Gray, created the story following the prescribed (Gray, 1998; Gray, n.d.; Gray & Garand, 1993) protocol, which appears in Appendix A. The story theme focused on behavioral self-regulation, specifically waiting, based upon teacher reflections in a pre-intervention focus group. One teacher commented that she did not struggle with misbehavior but rather, helping the children "...learn how to behave in the classroom; that is my issue." Teachers agreed that in these classrooms children's attention is not sustained, that is, children tend to focus on single experiences for few seconds before moving to different activities. Children behaved impulsively, acting or reacting without any warning, such as taking things from others without explanation or waiting for a turn. Frequent moves and sporadic attendance by many children were ongoing challenges. Teachers expressed concern that children were frequently absent for extended periods of time related to recent deployment, visitation, or reintegration of the military parent or base transfers. Classroom composition changed weekly.

Consequently, any technique should be easily implemented by the teacher, effective within a group setting as well as with the individual child.

The social story song consisted of two verses and a chorus set to a familiar tune from the popular show "The Addams Family" (Mizzy, 1964/1992; see Appendix A). The music therapist applied the piggybacking technique to the social story song by selecting this familiar tune in order to make it easier for the teachers to learn and retain the song as well as to promote retention in the children (Kern, Wakeford, et al., 2007). Teachers were instructed to read the story and sing the entire song to the children during group sessions at least twice (one or more times initially and at least once during the remaining weeks) with an accompanying discussion about waiting. Teachers were to teach children only the chorus of the song. During the week, the teachers were instructed to prompt individual children to wait by singing the chorus only of the song as a cue.

Procedures

The total timeframe of the study was three months including pre- and post-intervention focus groups, teacher training, and the intervention. Teachers implemented the social story song on a continuous basis for a total of 18 days over five weeks between October and November (children were out of school three days one week for parent-teacher conferences). The University Institutional Review Board (#5569) and the director of special education for the school district reviewed and approved procedures.

Focus groups. Researchers conducted both pre- and post-training/intervention focus groups with the early childhood teachers. Groups met

in one of the school classrooms on respective Friday afternoons. One research team member conducted groups while other members observed and recorded using both audio and video devices. One team member converted recordings to a DVD for transcription. After teachers signed informed consent, the protocol for the pre-intervention group included demographic information about themselves and their classes as well as current interventions and those that were successful in the past. Teachers indicated they were not implementing any other program to address this social skill.

Training on the social story song occurred three weeks following the first focus group allowing time to develop the social story song on waiting. The post-intervention focus group questions again centered on teacher and class demographics followed by questions on the efficacy of the training, staff engagement, children's responses, record keeping, and parent acknowledgement.

Teacher training. Teachers participated in one training session for 1.5 hours during lunch (provided) on the Friday prior to initial implementation on Monday following. The music therapist, conducted training for the teachers about "The Wait Song" (Appendix A) and reviewed specific written protocol for implementation, which included instructions for introducing the song to the children and singing the chorus of the song as a prompt (see Appendix B). In the protocol, teachers were to present the song to the children during the group time beginning with a discussion about waiting. Teachers were to ask children specific questions about waiting and then sing the chorus and first verse of the

song. Next, teachers were to lead a discussion about what bothering and waiting looked like (also with provided questions) and then sing the second verse of the song, incorporating suggestions for the children if possible. The introduction of the song concluded with the teacher and children singing the chorus together. Using the chorus as a prompt, teachers were to sing the chorus in individual situations as intervention to help a child to wait. At such time, instead of giving a verbal or physical prompt, the teachers were to sing the chorus of the song once to the child, inserting the appropriate word for the situation (i.e., "Wait for the book."). If the child response was not appropriate, the teachers were to wait for five seconds and then sing the chorus again. If the child continued to have difficulty waiting, the teachers were to prompt as they typically would. Teacher training concluded with role-playing of potential situation in which the song prompt might be used in class.

In a daily record book, teachers were to record when they sang the song to prompt a child, the context, and the child's response. Teachers were to record up to three events per class session and indicate if the song was sung more than three times using checkmarks on the bottom of the page. Each teacher received a DVD with the song to rehearse. The rehearsal disc was not to take the place of the teacher singing directly to the child.

Fidelity of implementation. Researchers observed in each classroom once a week for an hour to monitor fidelity of implementation. Team members rotated between classrooms each week and taped teachers' interactions.

Researchers reviewed the record book, addressed questions, and provided guidance. One team member transferred videos to DVDs for review.

Data Analysis

Researchers analyzed two sets of data guided by the research questions: comments from the post-intervention focus group with teachers and the comments recorded in the booklets. Researchers independently reviewed the comments and identified common themes addressing each question. Team members met to compare analyses and reach consensus. Researchers used teachers' booklets to analyze frequency of implementation and child activity when the song was initiated.

Results

Results are presented by research question. Pseudonyms are used for adults and children.

Integration of Social Story Songs in the Classroom After Initial Training

Teachers reported the one-time training was sufficient and instructions provided by the music therapist were adequate to allow them to train their staff and implement the intervention. In response to the adequacy of the training, teachers noted:

Teacher C: *I think it was sufficient enough for me. I don't know what else [sic] would have done or asked for. If I felt I needed anything else, I would have just asked...*

Teacher B: *The paper she gave out was very specific. (Appendix A & B)*

Teacher C: *I could have gotten a hold of her [the music therapist], or, you know, if I needed to I could have.*

Teachers sang the social story song across the daily routine, most frequently when transitioning from one activity to another. The song was sung inside and outside, during snack, waiting at tables for particular activities, and waiting outside at the steps before entering the classroom (Table 1).

Teacher B: *It was transition that was when I used it because I would sing it for the same instances every day, at snack table or in waiting at the table, because they are always [impatient]. Or at circle times I transitioned by doing different things [such as] "Wait for your name" or "Wait for your coat," that kind of thing; it was a repetition of when we used it.*

By their comments, teachers revealed inconsistencies in implementing the strategy. Teacher A did not encourage her para-professionals to use the intervention as did Teachers B and C. Teacher C began by teaching the children to learn and sing the entire song to prompt waiting and as a result did not consistently use the intervention when it was appropriate to do so.

Teacher C: *A couple, I mean like when we were singing it at group and introducing it, I was like, "Can you sing it?" and she said, "That's too many words." So I'm not sure, like, I didn't use it that many times because I don't think they were listening through all the stuff and I don't think that's what made the difference. What I think made the difference was the "Wait for your turn..."*

Teacher A found it challenging to retrain herself from talking to singing.

Teacher A: *I will find myself saying the words “You need to wait your” and then at that moment I am, like, I should have sang the song so... it’s not because I was not trained.*

Teachers’ Perception of the Effectiveness of Social Story Songs

The intent of the selected social story song, “The Wait Song,” was to encourage the individual child to regulate his or her behavior in response to the song prompt. Teachers reported the intervention to be effective, that is, children waited in response to the prompt.

Teacher B: *At those meal times, you start singing, and they just look at you, and they know to start singing, and that’s what happened.*

However, not all children internalized the song. Teachers shared instances of one child with reactive attachment disorder and of another child with a brain injury in which these children started screaming or became physically aggressive when the teachers prompted with the song.

Not only did the intervention change individual behavior, the song prompt changed behavior of the entire class. The following conversation illustrates teachers’ view of the effectiveness of the intervention to change the behavior of the group.

Teacher B: *Always in mine [referring to the children] it would stop the behavior because everyone else started singing [sic] than yelling for chocolate milk and sing the song. Once somebody started it, they would all join in.*

Teacher C: *And it kind of seemed to be the same here; like if she [child] was singing at the breakfast table, they would be like, "Wait for the milk," so I would be at my desk and sing it with them. It's just a natural inclination.*

The following excerpts from the conversation demonstrate the adoption of the strategy by children with special needs and their typically developing peers. Some children sang it to regulate their own behavior, while in other instances peers sang it to each other to prompt waiting.

Teacher B: *I don't know if it's because of it, but one of my little girl's just singing everything now, and she is one of my special needs [kids]. She'll be sitting outside on the bench before coming in and waiting for her name, and she'll be singing.*

Teacher C: *...I think that I might go back to the social part of it, but I did once [sic] say, the peers were the ones that were [sic] initiative on their own. But it kind of made me cut back. But towards the end I wasn't the one having to say [it]. When they were, like if she looked back and saw somebody behind her, she would say, "Wait for the steps," so it wasn't me intervening.*

Teacher B: *That's the peer interaction.*

Teacher C: *So that's the pro-social part of it, too. She was telling somebody else, and that's the way they are supposed to learn best. Instead of me telling you what to do, it's a peer telling you what to do.*

Teacher A: *And it's probably in a manner that the other child who was*

being told to wait probably handled it better than me always telling them. But even if she had just said, "Please, wait," they might have reacted to her saying those words and would react differently to a song being sung afterwards.

Teacher C: *Well, I don't know if this was the right or wrong thing to do but started using it for that. Like I could just say, "Sing." Like if they are waiting. I would be singing the song, and they would just know [sic] the song what they were supposed to sing when they were waiting by the time whatever was being passed to them.*

Researcher: *Oh, so you were using it as a self-regulator.*

Teacher C: *Right. They were sitting there singing. Or I use it almost daily with the steps because they have to climb up the steps, and they were always right on top of each other trying to get up the steps. So that is when my peers were using it, too. They [sic] be like, "Wait for the steps," and by the time they were done singing, it was their turn.*

Teachers reported peers were effective models prompting with the song. Sometimes this occurred before the teacher started singing; at other times they would sing on their own in a variety of settings. Additionally, children, both those with disabilities and typically developing, also sang it to themselves. For example, a teacher shared the following circumstance about a child with autism using the song to regulate her own behavior.

Teacher C: *Yesterday, I have a little girl on the spectrum, and one of my boys had built a beautiful tower, a beautiful block tower, which she came*

and knocked over, and, God bless, this little boy came and hugged her instead of being angry with her and said, "It's okay," and then he started building towers for her to knock down, which was fantastic. So it gets better. So he's building towers, and she's so excited to knock them down, but she goes and knocks them [down] as soon as he gets one done. So I was like, "Come here, Alley. Let's sing this song." I sang the song and then we went and knocked it down and came back and sang the song again. We sang it two times just here and then together, and she went and knocked it down, and then she ran around the carpet, and she looked at me and sat in my lap and was like [mumbling to the Adams family beat] "Na na na blocks," "Na na na blocks" and I was [cheering]. I was just so excited, but she got it three more times. Like he built three more towers, and she ran back to me and in a jumble of language, "Na na na blocks," but I just knew it was. It was fantastic. It was good for her, good for him, good for me, good for everybody.

Discussion

The aim of this pilot research is to examine the efficacy of training early childhood teachers in an inclusive preschool program to use the social story song set to a familiar melody to affect children's waiting behavior. An analysis of teachers' perceptions suggests two major outcomes. First, teachers perceive the training by the music therapist to be sufficient and the protocol easy to implement and generalize across different classroom experiences although there are areas of uncertainty that allow some inconsistency. Second, the social story song is

effective in helping children wait, both typically developing children as well as some children with identified special needs, in the inclusive classroom setting.

Training and Integration

Results suggest that early childhood teachers can be effective interventionists with a social story song when a music therapist provides training consistent with the findings by Kern and colleagues (Kern & Aldridge, 2006; Kern, Wakeford, et al., 2007; Kern, Wolrey, et al., 2007). Two of three teachers report that overall they perceive the training to be adequate and the strategy easy to implement although the limited timeframe for the study may have posed a challenge for teachers to modify their current behavior adopting the new practice and a few children appeared resistant. While teachers understood they had direct phone and electronic access to the therapist for consultation, none of the teachers contacted her. It is unclear why, however. These findings suggest that ongoing collaboration, defined as "...the process of working jointly with others in an intellectual endeavor to bring about change, and it implies shared responsibility," (Register, 2002), in addition to the initial consultation may have been more effective for this group of teachers.

Effectiveness in the Inclusive Classroom

Teachers perceive most children are able to wait when singing "The Wait Song" across varied settings during the day. Thus, this research is responsive to the call for testing social story songs in other challenging routines (Kern, Wolrey, et al., 2007). What is more, the peer models in the classrooms can initiate singing the song to themselves and others without a cue from the teacher thus

modeling positive behaviors for children with identified special needs. Results are consistent with Kern and colleagues' (2007) findings that the stories, set to familiar melodies, are effective in the inclusive classroom setting and with the entire group (Pasiali, 2004). Teachers reported and authors verified by observations that, typically developing peers use the song as a strategy to not only regulate their own behavior but also to engage a child with a disability, fulfilling the major purpose of the peer model and supporting the second research question that the song is effective in the group environment.

Our research team is particularly intrigued with the behavior of the child with autism who mimicked the chorus of the song to help her regulate her behavior as she observed her peer build block towers during the final week of the intervention. This self-prompting behavior is a hopeful sign that the social story song is becoming an integrated part of her behavioral repertoire which supports Vygotsky's proposition of language as a psychological tool (Wertsch & Tulviste, 1992) and Thaut's (1987) assertion that children with autism are highly responsive to music.

Implications for Practice

We suggest two implications from this research. The first is that early childhood teachers would benefit from ongoing collaboration with a music therapist when implementing new strategies, particularly during the introductory sessions with children. Although the teachers were amenable to trying a social story song, it was a new technique for them. We expected the teachers would dialogue and encourage each other; however, the demands of a constantly

changing classroom minimized any time to work with one another. Teachers may benefit from frequent and regular initiations from the music therapist to problem-solve as they integrate the strategy into practice. Secondly, and in support of the inclusive classroom philosophy of practice, children who are typically developing also benefit from techniques designed for exceptional children. When peers are engaged, not only do they regulate their own behavior but also they serve as models and assistants to teachers for children exceptionally developing.

Limitations and Future Directions of the Research

This study is limited in its generalizability due to the small number of classrooms involved in the study as well as the location, a military base with a highly mobile population. As noted, we were not able to observe the change in multiple individual children over time, which would have been our preference, because the enrollment changed rapidly. However, this is an authentic concern for the teachers in this environment who are attempting to have a positive impact on children in the short time they may be involved in the classroom. The intervention was limited, 18 days in this pilot study; consequently, further research is needed to follow the teachers' use of social story songs over time. Furthermore, research should focus directly on observed change in child behavior utilizing a reversal design (ABAB) to provide evidence of intervention effects among not only children with autism and other disabilities but also adoption by peer models in the inclusive program. Finally, examining familial engagement with social story songs when trained by a therapist extends this research to include the broader ecology of the child.

References

- Brownell, M. (2002). Musically adapted social stories to modify behaviors in Students with autism: Four case studies. *Journal of Music Therapy, 39*(2) 117-144.
- CSEFEL: Center on the social and emotional foundations for early learning. Retrieved 7/24/2012, 2012, from <http://csefel.vanderbilt.edu/modules/module1/script.html>
- Copple, C., & Bredekamp, S. (2009). *Developmentally appropriate practices (3rd ed.)*. Washington, DC: NAEYC.
- Davis, W. B., Gfeller, K. E., & Thaut, M. H. (2008). *An introduction to music therapy theory and practice (3rd ed.)*, Silver Spring, MD: American Music Therapy Association.
- Gray, C. (1998). Social stories and comic strip conversations with students with Asperger syndrome and high functioning autism. In E. Schopler, G. B. Mesibov, & L. J. Kuncze (Eds.), *Asperger syndrome or high-functioning autism?* (pp. 167-198), New York, NY: Plenum.
- Gray, C. (n.d.). *Sample social stories*. The Gray Center for Social Learning and Understanding. Retrieved on June 24, 2008 from <http://www.thegraycenter.org>.
- Gray, C., & Garand, J. D. (1993). Social Stories: Improving responses of students with autism with accurate social information. *Focus on Autistic Behavior, 8*(1), 1-10.

- Kern, P., & Aldridge, D. (2006). Using embedded music therapy interventions to support outdoor play of young children with autism in inclusive community-based child care program. *Journal of Music Therapy, 43*(4), 270-294.
- Kern, P., Wakeford, L., & Aldridge, D. (2007). Improving the performance of a young child with autism during self-care tasks using embedded song interventions: A case study. *Music Therapy Perspectives, 25*(1), 43-51.
- Kern, P., Wolrey, M., & Aldridge, D. (2007). Use of songs to promote independence in morning greeting routines for young children with autism. *Journal of Autism and Developmental Disorders, 37*, 1264-1271.
- Mizzy, V. (1992). *Addams Family Theme*. New York, NY: Unison Music Company (ASCAPP) administered by Next Decade Entertainment. (Original work published 1964)
- National Research Council (2001). *Educating children with autism*. Washington, DC: National Academy Press.
- Pasiali, V. (2004). The use of prescriptive therapeutic songs in a home-based environment to promote social skills acquisition by children with autism: Three case studies. *Music Therapy Perspectives, 22*(1), 11-20.
- Register, D. (2002). Collaboration and consultation: A survey of board certified music therapists. *Journal of Music Therapy, 39*(4), 305-321.
- Register, D., & Humpal, M. (2007). Using musical transitions in early childhood classrooms: Three case examples. *Music Therapy Perspectives, 25*(1), 25-31.

- Reynhout, G., & Carter, M. (2007). Social Story™ efficacy with a child with autism spectrum disorder and moderate intellectual disability. *Focus on Autism and Other Developmental Disabilities, 22*(3), 173-182.
- Sandall, S., McClean, M., & Smith, B. (2000). *DEC Recommended practices in early intervention/early childhood special education*. New York, NY: Council for Exceptional Children.
- Sansosti, F. J. Powell-Smith, K. A., & Kincaid, D. (2004). A research synthesis of social story interventions for children with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 19*(4), 194-204.
- Scattone, D., Wilczynski, S. M., Edwards, R. P., & Rabian, B. (2002). Decreasing disruptive behaviors of children with autism using social stories. *Journal of Autism and Developmental Disorders, 32*(6), 535-543.
- Thaut, M. H. (1987). Visual vs. auditory (musical) stimulus preferences in autistic children: A pilot study. *Journal of Autism and Developmental Disorders, 17*, 425-432.
- Wertsch, J. V., & Tulviste, P. (1992). L. S. Vygotsky and contemporary developmental psychology. *Developmental Psychology, 28*(4), 548-557.
- Wolfe, D., & Hom, C. (1993). Use of melodies as a structural prompt for learning and retention of sequential verbal information by preschool students. *Journal of Music Therapy, 20*(2), 100-118.

Appendix A

Social Story Song Project

The music therapist designed the following social story in accordance with the guidelines outlined by Gray (1998), which recommends the use of descriptive and directive sentences with a ratio of two to five descriptive sentences for every directive sentence.

Social Story for “The Wait Song”

Sometimes when I’m at school I have to wait for my turn. (Descriptive sentence)

Waiting for my turn means that I don’t get to do something right now. I have to wait until my friend is finished before I get a turn. (Descriptive sentences)

When I’m waiting for a turn, I will remember to wait quietly and keep my hands to myself. (Directive sentence)

Teacher Instructions for “The Wait Song”

Tune: The Addams Family (*Mizzy*, 1992/1964)

Chorus: Wait for the _____, (clap, clap) 5x

Verse One: When I’m waiting for the _____,

I really need to think.

I need to wait my turn without bothering my friends.

Chorus: Wait for the _____, (clap, clap) 5x

Verse Two: No *grabbing and no *pushing,

I’m *quiet and I’m *sitting.

I need to remember I have to wait my turn.

Chorus: Wait for the _____, (clap, clap) 5x

The blank section of the chorus may be provided by the teacher or from suggestions provided by students during discussion.

*In verse two, the words with the asterisks may be replaced with suggestions provided by students during discussion.

Appendix B

Instructions for Introduction of "The Wait Song"

1. Discuss waiting for a turn.
 - Ask students what things they wait for in the classroom.
 - If necessary, briefly describe a scenario of waiting for a turn in the classroom, such as waiting to play with a toy.
 - Ask students to listen to a song about waiting.
2. Sing the Chorus, Verse One (incorporating an item suggested by a student, if possible), and the second Chorus of the song. *Students may begin to sing the chorus with you at this time.
3. Ask students what "bothering" looks like.
 - What do you do with your body when you bother someone? (ex. grab, push)
 - What does your voice sound like when you bother someone? (ex. yelling, crying)
4. Ask students what "waiting" looks like.
 - What do you do with your body when you wait? (ex. hands to self, sitting)
 - What does your voice sound like when you wait? (ex. quiet, nice words)
5. Ask students to listen to the second part of the song.
6. Sing Verse Two of the song, incorporating words suggested by the students if possible.

7. Ask students to sing the “wait” part of the song with you. (Chorus)
8. Sing the Chorus together.

*Optional: Ask other students for items they wait for and sing just the chorus together using their suggestions. This may be done during group time without singing the whole song.

As a prompt: Teachers may use the Chorus as a prompt when a student needs to wait in a specific situation.

For Use as Prompt:

1. In a situation where teacher intervention is required to help a student to wait (i.e.: teacher says, “Susie, you need to wait.”), **sing the Chorus part of the song to the student instead of verbally prompting,** inserting the appropriate word for the situation in the chorus (i.e., “Wait for the book.”).
2. If the student does not wait appropriately, (desired behavior of the student is not achieved) **wait five seconds and prompt with the Chorus again.**
3. If the desired student behavior is still not achieved, **prompt as necessary** (verbally, physical intervention, etc.).

Table 1

Reported Frequency of Singing the Social Story Song by Classroom and Context

Context	Classroom		
	Teacher A	Teacher B	Teacher C
Snack/breakfast/lunch	2	12	15
Free play	1	1	9
Group/circle time	7	3	6
Washing at sink/bathroom	2	6	1
Outside including going out and coming in	1	2	10

Note. Numbers combine frequencies in morning and afternoon sessions for each teacher.