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Social Stories and Student Behavior in a Kindergarten Classroom

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Social Stories and Student Behavior in a Kindergarten Classroom

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in Partial Fulfillment of the Requirements
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Abstract

The purpose of this action research was to determine the impact of a whole group social story on the practice and development of self-regulatory skills of kindergarten students. The research setting was a small, rural public school in the Midwest. The participants were 16 five and six-year old students in a general education kindergarten classroom. Qualitative and quantitative data focusing on self-regulatory behaviors was collected through observation during pre and post-intervention times. Kindergarten students participated in four weeks of a whole group social story intervention that occurred between the data collection weeks. This social story focused on positive and appropriate behaviors during whole group reading together time. The results of this study suggest that intentional practice and support of self-regulatory skills through a whole group social story does have a positive impact on student behavior within the classroom setting.

Social Stories and Student Behavior in a Kindergarten Classroom

Preschool and kindergarten grade level expectations have changed in recent years to place more focus on academic skills than previously when the focus was placed on social and emotional development (Montroy, Bowles, Skibbe, McClelland, & Morrison, 2016). Schedules are tight. Kindergarten classrooms look different. There are not as many spaces set aside for play kitchens or tool benches. There are not many dolls or toys to be seen or dress up clothes to be worn. Classroom teachers have been forced to choose between rest time, milk break, and academic interventions. The pressure of academic success has intensified for these young children. However, studies support the belief that social and emotional skills, specifically regarding self-regulation, play a significant role in academic achievement (Montroy et al., 2016). Research suggests that kindergarten students with lower ability to self-regulate will also have lower achievement in literacy and math possibly through the sixth grade (Montroy et al., 2016). “Some children are not ready to integrate the multiple processes required by advanced behavioral self-regulation when they first reach school” (Montroy et al., 2016, p. 4). The current level of students’ ability to self-regulate must be considered as teachers purposefully plan for classroom instruction just as they would consider academic level when planning for math, literacy, and interventions. Because of this, it is crucial that policymakers, researchers, educators, administrators, and parents understand the continued importance of developing self-regulation skills so that all children can be successful in their present and future daily living, as well as in the interactive and academic classroom environment.

Students come from a variety of backgrounds and have a variety of skill sets. Early childhood educators have the responsibility of creating opportunities for students to be successful academically, but also socially and emotionally. Educators should strive to find an effective

strategy or program that can be consistently integrated into classroom instruction. This strategy or program should be effective for all children. Early childhood educators need to be able to support all children with executive functioning in situations that seem to be challenging at the kindergarten level.

Social stories were created in 1991 by Carol Gray (National Autistic Society, 2018). They are brief descriptions of a situation or activity that can help people understand what to expect and practice different ways to respond. They include learning around social interactions, feelings of self and others, and life skills (National Autistic Society, 2018). Many educators might be familiar with social stories in a one on one setting, a special education setting, or in a classroom setting that includes significant para support. These social stories might be specifically chosen or developed to focus on needed skills of the individual student. These skills might include daily transitions, independent work time, lunchroom, or playground behavior. Frequently, teachers will request extra support or resources to help students with skills including those of self-regulation. Many times, it is suggested by the experts that classroom teachers implement social stories, but they are not informed of the why, how, or how long to implement.

The effect of the use of social stories on positive student behavior of kindergarten students during whole group reading together in the classroom is the topic of this current action research. The main research question is “can consistent use of social stories help enhance positive behaviors of kindergarten students during whole group reading together time?” This action research will help give insight into the effects of social stories on the development of self-regulation skills that are needed in the classroom. This action research might help determine if a whole group social story would be beneficial for early childhood students. Educators not only at the kindergarten level, but also preschool and first grade could use the findings from this

research to help make decisions for instruction in the areas of self-regulation and other executive function development.

Review of the Literature

Self-Regulation

Self-regulation requires the application and cooperation of multiple skills working together across the domains of physical, social-emotional, cognitive, behavioral, and motivational (Montroy et al., 2016). Self-regulation in the classroom setting involves children being able to effectively utilize the executive functions, including attention, working memory, inhibitory control, and motor and verbal functions (Montroy et al., 2016). If these skills have been developed, educators are able to observe children exhibiting and practicing them at different times in multiple settings throughout the day. Self-regulation cannot be misunderstood as compliance or obedience (Aras, 2015). Self-regulatory skills are used during social interactions with others, but are also used during individual cognition, or thinking (Aras, 2015). Focusing attention can involve children being able to engage with a story being read even with the noise distraction and proximity of their peers beside them. Another example of focusing attention is staying on task with their independent work even when they would rather tap their pencil, look out the window, or worry about what is next in the schedule. Utilizing working memory in the early childhood setting might involve a child receiving two directions. The child will need to remember to put his or her backpack in the closet, but first take out the folder and lunchbox. Another example is remembering to start the independent work page right away, but first writing their name at the top. An example of inhibitory control in the classroom is a child being able to sit and listen during whole group time without jumping up to get a drink or take out a play center when they lose interest in the story. Being able to use these skills effectively

together will allow children to focus their attention while adapting and interacting appropriately within the classroom environment and with their peers (Williams & Berthelsen, 2017).

As previously addressed, self-regulation should not be confused with the ability to obediently follow rules or with immaturity. When a concept is misunderstood, the opportunity to intervene appropriately can be missed. It is crucial that classroom teachers and school districts are accurately informed about the importance of self-regulation when working with students in the early childhood classrooms. The following table clarifies some common myths about self-regulation (Aras, 2015). When instructional decisions are based on these myths, or inaccurate beliefs, results for children can be less than ideal.

Table 1

Myths and Adult Implementation (adapted from Aras, 2015)

Myths	Implementation	Results
Children are too immature to control themselves	Waiting for children to mature	Children not provided instruction or support to develop self-regulation. Difficult for teachers to control challenging behavior
Children with underdeveloped self-regulatory skills have ADHD or another medical condition	Diagnosing and Identifying medical conditions	Children are medicated who might not actually need to be

Children with underdeveloped self-regulatory skills also have aggressive personalities	Implementing the “you are out” role in classroom	Number of students expelled increases
Only solution to help children regulate is more teacher control	Activities become more teacher directed	Children are not able to experience self-initiated activities
Parents do not give children independence to learn to self-regulate	Placing the blame on parents and home environment – suggesting a change in parenting strategies	Missed opportunities to practice and develop self-regulatory skills in the school classroom

Developing Self-Regulation

The development of early self-regulation is enhanced through responsive relationships with caregivers such as parents and adults working with children in education programs (Williams & Berthelsen, 2017). Children who have developed some self-regulatory skills can better control impulses and make appropriate decisions even when not under the constant supervision of adults (Aras, 2015). These developed skills can be easily observed throughout the school day by teachers and other staff members. Children with stronger skills can calmly walk down the hallway without yelling or tapping peers. These children can quietly wait their turn to get silverware and milk in the lunch line. They are better able to control outbursts when upset with the outcome of a game or activity at recess. Recently, early childhood educators, specifically at the kindergarten level, are feeling pressure to rush through and instruct on a large

amount of academic information. There is more support from outside resources when there is an academic concern. There are many interventions and strategies to utilize to help enhance academic skills. However, the successful development of self-regulation can contribute to academic learning, and educators are often not given the time and resources needed to help children with these skills. Kindergarten needs to be developmentally appropriate and effective for all children. Just as children learn to read at different rates, they also learn to self-regulate at different times. The kindergarten classroom needs to provide a healthy balance for children to not only learn academic skills, but also to begin to understand how to self-regulate (Silverman, 2019). When children are not able to focus enough to engage with the academic instruction, the classroom becomes a place where the teacher is simply trying to manage behaviors instead of deliver instruction by integrating academic and social learning (Aras, 2015).

A recent study conducted with 1,386 children across three diverse samples used the Head, Toes, Knees, Shoulders task to measure children's self-regulation abilities from the ages of three to seven. This research followed children from preschool to first grade. This measurement tool involves giving directions, children respond to the direction, and then children are to perform the opposite of the given direction (Montroy et al., 2016). An example would be touching their toes when instructed to touch their head. To do this, children must be able to apply cognitive skill to physical skill by following instructions, utilizing their working memory to remember instructions and respond, and stop the automatic response but instead respond correctly (Vernon-Feagans, Willoughby, & Garrett-Peters, 2016). These findings were also combined with classroom data and parent information. Information from parents gives insight into the home environment and how children are interacting and regulating in multiple situations. Results indicate that children do increase their ability to self-regulate between the ages of three

and seven, but the time and rate at which they do this differs (Montroy et al., 2016). In connection with whole group reading together time, children need to be able to follow the physical instruction of sitting appropriately. However, they also need to utilize the working memory aspect of the executive functions to recall the story's content. And, in turn, need to exhibit the ability to respond in the expected manner when answering a question, asking a question, or communicating with a peer about the story. These are not easy tasks as there are multiple and constant distractions for children. These distractions can be external including classroom lighting, people in and out of the room, textures on the carpet, activities happening outside the window, or a humming sound from a nearby peer. Internal distractions could be the feeling of hunger, questions about what is coming next in the day, or a plethora of other emotions.

Contributing factors. Educators are typically fully aware that there are multiple factors that can influence a child's behavioral and academic achievement. Factors that contribute are present in different environments and different social groups. Influences come from home, school, extra-curricular activities, interests, social groups, innate strengths and weaknesses. Specific factors such as gender, language, and maternal influence can affect a child's development trajectory (Montroy et al., 2016). Because there are so many contributing factors and children can be influenced by many people across multiple environments, it is imperative that consistency and intentionality of instructing on these skills is present within the school setting. Further research completed by Pekdogan (2016) indicates that social skills do contain elements related to cognition, behavior, and environment.

Environment and parenting. Additional research has been completed on the influence of environmental factors on regulatory skills. A study evaluating household chaos was

completed with a sample group of children from low-income rural counties in North Carolina and Pennsylvania (Vernon-Feagans et al., 2016). These children and their families participated in this study from the age of two months until 36 months through home visits and interviews (Vernon-Feagans et al., 2016). The children were then evaluated in their kindergarten classrooms. Results indicated that household chaos and environmental factors such as lower income, single parent homes, different people moving in and out, the television always on providing background noise did have a negative effect on responsive parenting (Vernon-Feagans et al., 2016). Parents were less responsive to the children's needs and were not providing the appropriate support and scaffolding needed. The parenting style then had a negative effect on the children's ability to develop executive functions such as self-regulation from the ages of three to five that would help them to perform and adapt in the kindergarten classroom. "The disorganized chaotic household appears in this study to disrupt positive parenting, such that parents may not be able to scaffold children's early executive functioning and regulatory skills" (Vernon-Feagans et al., 2016, p. 438). It has been noted that maternal sensitivity and support does play a crucial role in the development of executive functioning (Blair, Raver, Berry, & Family Life Project Investigators, 2014). The debate between nature and nurture will continue as to whether which has the greatest influence on children as they grow, develop, and progress through school. Although behavior is greatly influenced by a child's environment and family relationships, the child's temperamental position also can play a role in development (Williams & Berthelsen, 2017). Regardless of where an educator's personal beliefs align, all educators must recognize that all children are unique. They each play an important role within the classroom. It needs to be understood and respected that their individual natural characteristics and their previous experiences will impact current skill levels regarding self-regulation.

Disorders. Research has also shown that children with autism spectrum disorders (ASD) have difficulty developing social skills and regulatory behaviors. These children also need additional support acquiring social skills and independence (Bozkurt & Vuran, 2014). Social stories that explain and demonstrate appropriate actions in specific situations were created by Carol Gray in 1991 with the intention of helping children with ASD develop social skills (Bozkurt & Vuran, 2014). The use of social stories has been an effective intervention because stories are short, visual, simple to write and apply, can be used multiple times with students, and focus on the actions or thoughts of others (Bozkurt & Vuran, 2014). These social stories are typically used in a small, one to one setting with the student. These social stories will be tailored to the individual student's needs. For example, if a student is overwhelmed and struggles to respond appropriately during a fire drill, then a social story might be written and read with the student consistently so he or she can be more comfortable in that situation. Another social story might be written to help the student successfully complete the dismissal process at the end of each school day. This might include checking his or her mailbox, packing a backpack, putting on a jacket, and lining up in the correct spot. Social stories have been effective for children with ASD, but there is not a large amount of information about their specific effectiveness when used as an intervention in a whole group instructional setting.

The Kids in Transition to School, or KITS Program, is a short intervention that focuses on school readiness for children who will be starting kindergarten (Pears, Kim, Healey, Yoerger, & Fisher, 2015). This program involves children and parents the summer before kindergarten and for the first two months of kindergarten. One focus of the program is on self-regulatory skills, but also literacy and social skills (Pears et al., 2015). The program focuses on helping children develop these skills. It also helps give parents training so they can develop positive

skills to interact with and manage their children's behavior as well as promote academic readiness at home before school begins (Pears et al., 2015). This could potentially have many benefits. Many parents sincerely want to help their children learn new skills, however, they are unsure how and not aware of how to ask for help. This program could have benefits for the children in learning necessary skills. It also has potential to open positive doors of communication between parents and teachers.

The most recent study using the KITS Program involved 209 participating families. The children in these families qualified to participate if they had documented developmental disabilities as well as behavior difficulties (Pears et al., 2015). Results show that it is particularly important for parents to gain knowledge and be involved to help their children with disabilities develop these skills. Results also indicated that even with targeted interventions in self-regulation before and at the beginning of the year, positive impacts might not be seen immediately (Pears et al., 2015). These specific school readiness interventions may have a positive impact on end of year outcomes instead of at the beginning (Pears et al., 2015). Educators need to recognize that not all achievement is immediate. Learning and practicing new skills involves a process of development and does take time, consistency, re-teaching, and repetition.

Improving Self-Regulation

There is not an extensive amount of evidence that proves the effectiveness of intervention that can help children develop self-regulation skills (Williams, 2018). However, as suggested by Aras (2015), it is imperative that all children do receive scaffolding and support during the process of developing self-regulation. Within the classroom, this could be done with reminders,

music, or props. Much of this scaffolding is done by teachers naturally throughout the school day. Support in learning to self-regulate is provided constantly during academic learning times, including small and whole group instruction, recess time, lunchtime, and even during transitions. Over time, the support from the teacher can be decreased while children are more capable of using their own mental tools to regulate, socialize, and pay attention (Aras, 2015).

Curriculum. A classroom environment cannot be considered developmentally appropriate unless it also supports self-regulation skills (Viglas & Perlman, 2018). It is possible that self-regulation programs used in kindergarten classrooms could positively impact overall achievement for children (Viglas & Perlman, 2018). Many districts have implemented a variety of positive behavior and character programs. Districts try to integrate one program across buildings and grade levels to gain and maintain consistency and unification. However, there is concern that programs appropriate for upper elementary are not quite tailored to early childhood. These programs, although effective for many, may need to be adapted to fit the needs of all students in all grade levels.

Tools of the Mind is one curriculum that has focused on the development of self-regulation (Aras, 2015). Aras (2015) does recommend that it is necessary for children to develop these skills. Tools of the Mind is based on the theory of Vygotsky that cognitive and social learning need to be an integrated unit (Aras, 2015). This curriculum supports and encourages purposeful academic learning through social interaction, make believe play, and the assignment of roles within the play. Educators have been given the mounting challenge of incorporating rigorous academic learning while also maintaining social learning. Some curriculums written for schools try to integrate social and academic into the instruction. However, teachers are now forced to get creative to fit the instruction and practice of all skills, including those of self-

regulation into a small amount of time. There is not a punishment or reward aspect of Tools of the Mind. Instead, activities are geared toward developing self-regulatory behaviors while also supporting academic achievement (Aras, 2015). With the increase of play, language, and private speech to help develop self-regulatory skills, teachers will be able to better assist children in learning instead of managing so many challenging behaviors. A variety of other programs and strategies also need to be researched to find effective methods. Early childhood educators are fully aware that some children need more support and scaffolding with specific skills than others. However, it continues to be crucial that all children are immersed in curriculum that helps them to develop self-regulation skills no matter what their level of learning. It is important to “promote all self-regulatory skills” and “practicing purposeful behaviors are beneficial for all of the children” (Aras, 2015, p. 22).

Aras (2015) supports play with peers, interaction, and language to practice and enhance one’s ability to self-regulate. It is important to develop these skills to be successful independently, in an environment with peers, but also in a classroom environment working with adults. A previous study found that many five and six-year old children in the kindergarten grade level have started to develop knowledge of norms and rules (Altidor-Brooks, 2018). However, they are still very incomplete with their ability to fully embrace the expectations and rules. Children are not able to regulate their responses as well as most adults. They have less tact than adults in communicating their own responses and reacting to the actions of others (Altidor-Brooks, 2018). During this study observing kindergarten students’ ability to interact, regulate, and socialize at the sand center, it was found that culture, language, and personal background experiences do influence these skills (Altidor-Brooks, 2018). These findings support the fact that the classroom teacher has a large responsibility to ensure that the classroom

curriculum and instruction will address the needs of all students as they are starting at different levels in developing these skills. It is found, once again, that the curriculum of the kindergarten classroom needs to incorporate not only academic learning, but also focus on the development of social, communication, and self-regulatory skills. This study was centered around development of these skills while at the sand center. Recently, many educators have seen a shift in math instruction within the classroom. Math has taken on a workshop form in many districts. This allows students to interact, use language, and practice self-regulatory skills while also being immersed with math content. Center activities and math workshop are ideal places for children to practice academic as well as social skills. However, it is imperative that young children are exposed to many settings and learning strategies across the classroom environment. While developing these skills, children need time to practice these skills independently, within small groups, within whole group, and with the adult teacher or caregiver.

To improve children's social abilities including not only self-regulation, but also problem solving, relationships, and development of academic skills, needed social skills should be recognized, and "enhanced with education" (Pekdogan, 2016, p. 306). By interacting with stories, children can connect their daily life to the events and actions in the story. Children are encouraged to discuss the stories, reflect on what happened, and learn how to apply appropriate behavior in similar situations in their own lives (Pekdogan, 2016). The Story –Based Social Skills Training Program implemented by Serpil Pekdogan (2016) also showed that children respond positively to learning when in a supportive environment. A follow up was completed to determine if the sample group of children ranging in age from five to six years had retained the social skills learned during the story training. Results from four weeks after implementation show that the positive effect on children's social skills was continuing (Pekdogan, 2016). When

systems are in place to help children learn and interact with comfort and utilize age appropriate materials with which they can connect, positive outcomes can be seen in terms of social skills development (Pekdogan, 2016). The importance of social skills and stories can be supported in the early childhood classroom in multiple ways. Educators can provide a puppet and story-telling area. Students can access puppets, make puppets, or read from big books. Students can have a writing area to draw and write their own stories that focus on characters with appropriate behaviors. Students can also participate in the practice of social skills by participating in shared writing. They can write and illustrate a class book together that supports age appropriate skills and behaviors within the classroom.

Music and movement. A foundational skill in music is the ability to maintain a steady beat (Williams, 2018). Sensorimotor or beat synchronization is the “coordination of rhythmic movement with external rhythm” (Williams, 2018, p. 88). The development of beat synchronization has been found to be related to the neurological pathways for auditory, motor, and speech processing (Williams, 2018). Williams (2018) suggests that practicing beat synchronization with rhythm and movement could help with the development of self-regulation skills. Many early childhood educators incorporate music, rhythm and movement into their daily learning routines. Perhaps, the skills that are being supported and developed include executive functions as well as academics. With music and movement in a classroom, children can become more social and interactive. Educators are also aware that many children will continue to practice the songs, chants, and physical movements outside of the classroom as well. Parents have reported that their children bring home songs and actions to teach to them and younger siblings. Incorporating music and movement can help build self-esteem and peer connections for students who may struggle with other skills such as academics. This is a creative strategy that

can help children practice self-regulatory skills within the classroom as well as other environments.

Management and modeling. Price and Steed (2016) suggest that positive behaviors can be exhibited when classroom expectations are clear and consistent. It is imperative that the teachers decide when and how they will teach the expectations (Price & Steed, 2016). It is beneficial when there are pictures for the children to see of themselves, their peers, and the school staff exhibiting the appropriate skills (Price & Steed, 2016). Within the early childhood setting, it is crucial that teachers are consistent in communicating expectations and giving reasons for the importance of meeting them. Early childhood teachers often have students practice the skill in the actual location where it will be needed. The classroom process often includes the teacher modeling appropriate behavior. This is then followed by the whole class practicing the behavior. Finally, it is then modeled by individual students frequently and consistently to practice the right way. It can be very beneficial for school buildings to work together to unify expectations across teachers, classrooms, and grade levels. Although the development of certain behaviors might be more advanced in the upper elementary students, there will be more clarity and consistency to support students in their development if the expectations within common locations are the same. It is also suggested that teachers can instruct and explain these expectations by reading stories (Price & Steed, 2016). When given a choice, it was found that children tend to choose books with people over books about objects (Barnes & Bloom, 2014).

Aras (2015) further supports that teachers are instructing appropriately, but children are struggling to learn because they lack self-regulation skills. Because they are not able to follow directions and focus their attention, these children will not be able to meet academic expectations

in early childhood (Aras, 2015). With lack of the ability to focus, children will be missing out on important foundational concepts that are needed to continue to move forward socially and academically. It is vital for early childhood educators to share this information with others. It seems that many foundational concepts are going to be pushed too soon. The effects will be detrimental if children are not developmentally ready to learn. Now is the time for early childhood educators to stop rushing. Now is the time to use the skills and resources to provide the best opportunities for children to develop adequate skills of self-regulation. It is important for all children to be exposed to programs that support self-regulation development (Montroy et al., 2016).

As research has shown, children have different needs, come from different backgrounds, different experiences, and a variety of parental situations. Many have had extensive opportunities to develop the regulatory skills to be successful within their school environment, and many have not. Curriculum with a self-regulation focus that includes various developmental aspects of children may prove to have an extreme impact for all children, and for those at risk, as they prepare for and begin academic learning in a formal educational setting (Montroy et al., 2016). Giving that appropriate support to children as they acquire executive functioning skills may be vital in helping them to be able to make gains in literacy instruction (Zhang, Bingham, & Quinn, 2017). It is also suggested that for children to experience appropriate and positive peer relationships, they need to be able to self-regulate their own actions (Holmes, Kim-Spoon, & Deater-Deckard, 2016). It is crucial that educators stay informed of actions that need to be taken within the classroom and the schools to help children develop the necessary skills they need to achieve in the formal school setting and beyond. The development and practice of self-regulation skills during early childhood must be addressed and recognized so children can also

develop academically. Opportunities to practice these skills need to be integrated into the everyday curriculum. These skills need to be introduced with effective strategies, modeled, supported, and constantly reviewed so students can also understand the importance of successfully developing self-regulation skills.

Methods

Participants

This action research project was conducted within the teacher researcher's classroom. This is a general education classroom with 16 kindergarten students. All 16 kindergarten students ranged in age from five to six years old. All 16 students participated in the four-week whole group social story intervention. Student demographics ranged from low to high socioeconomic status. Fourteen students in the class are White-Caucasian, with two students being of African American and Hispanic ethnicities. Three students in this kindergarten classroom received social skills supports from the guidance counselor. Two students were working on skill development through a behavior program. Seven students were receiving speech intervention or speech services based on their individualized education programs. One student was receiving academic services based on an individualized education program.

Data Collection

The focus of this action research was to determine if consistent use of a whole group social story could help improve students' positive self-regulatory behaviors during whole group reading together time. This procedure was implemented over the course of six weeks. The first week included collecting pre-intervention data on four different days during the week. The following four weeks involved implementation of the social story intervention at least three days

during each week. The sixth week included collecting post-intervention data on four different days during that week.

Quantitative data was collected prior to the intervention. The classroom para educator collected this data by observing specific behaviors exhibited by kindergarten students. Each time a student engaged in a specific behavior, it was recorded on a tally sheet. Behaviors recorded included head or eyes not engaged in the direction of book and reader, body not sitting with legs folded in a crisscross position, hands touching other peers or objects, and blurting out. These behaviors were observed during a 20-minute whole group reading together time. During this time, students were seated at the classroom carpet facing the teacher as she read a story aloud. This data collection took place on four days during the first week in April. The data was collected April 1 through April 4 during whole group reading together time following lunch and noon recess. During the pre-intervention data collection, the para educator and teacher researcher also took quick memos of other behavioral observations when able to give them more insight as they reflected during the process.

After the pre-intervention data was collected, a whole group social story intervention was implemented by the classroom teacher researcher. This social story was written by the classroom teacher researcher to reflect classroom and school wide language and expectations when reading together. The classroom teacher read the social story to the whole group three times a week for the following four weeks after pre-intervention data collection. The story was read three times a week following the lunch and noon recess during the weeks of April 8 through April 12, April 15 through April 19, April 22 through April 26, and April 29 through May 3. When able, the teacher researcher would try to also observe and make notes of behaviors during the whole group intervention that might help give additional insight into behavioral changes.

Data was then collected post-intervention by the classroom para educator. Students were observed on the same behaviors as the pre-intervention during the same time of day covering the same time span. Each time a student engaged in a specific behavior, it was recorded on a tally sheet. Behaviors recorded included head or eyes not engaged in the direction of book and reader, body not sitting with legs folded in a crisscross position, hands touching other peers or objects, and blurting out. These behaviors were observed during a 20-minute whole group reading together time. During this time, students were seated at the classroom carpet facing the teacher as she read a story aloud. Post intervention data was collected May 6 through May 9. The para educator and classroom teacher researcher also tried to take brief memos when able to gain additional insight.

The dependent variable of change in student behaviors was measured by observing and tabulating the number of occurrences during reading together time. This research is qualitative and quantitative. The number of occurrences of behaviors supports the quantitative research and will show a specific amount of increase or decrease. The qualitative side of the research involves the type of behavior being observed. Quantitative data is also supported by the memos that are kept during the collection and intervention times to help give more information about behaviors. The classroom para-educator was available to tabulate occurrences of behavior during the pre and post-intervention reading together times. The para-educator and teacher researcher were able to make notes during contact and observation times to reflect on insights, or other behavioral findings during the intervention and data collection days.

Findings

Data Analysis

Data was collected pre-intervention by the para educator within the teacher researcher's kindergarten classroom. Specific student behaviors were recorded with tallies and totaled. After four weeks of a whole group social story intervention, a post-intervention observation was completed using the same process as the pre-intervention data collection. The number of occurrences of specific behaviors was totaled for the whole class as can be seen in Table 2. The difference in behavior was tabulated. The percent of decrease of each specific behavior was tabulated for the whole class. Overall, the whole class showed positive improvements in their self-regulation behaviors during whole group reading together from the time of the pre-intervention to post-intervention.

Table 2

Behavior Occurrences Whole Class Totals

Behavior	Pre- Intervention	Post- Intervention	Difference	Percent Decrease
Head/Eyes not engaged in direction of book/reader	97	42	55	57%
Body not sitting with legs folded/crisscross position	63	21	42	67%
Hands touching peers/objects	26	10	16	62%
Blurting Out	23	21	2	9%

The number of occurrences of each of the four specific types of behavior was recorded for each student. The number of occurrences was also totaled for each individual student. This information can be found in Table 3. The first number shows total occurrences during the pre-intervention. The second number represents the post-intervention total.

Table 3

Behavior Occurrences Individual Students

Names	Head/Eyes not engaged in direction	Body not crisscross	Hands touching peers/objects	Blurting Out
Student A	8 – 6	13 – 6	4 – 2	5 – 0
Student B	15 – 3	3 – 0	8 – 0	4 – 1
Student C	6 – 0	3 – 1	0 – 1	2 – 1
Student D	11 – 3	5 – 6	0 – 0	1 – 4
Student E	4 – 1	2 – 0	0 – 0	0 – 0
Student F	4 – 5	1 – 1	4 – 0	1 – 0
Student G	6 – 3	3 – 1	2 – 0	2 – 0
Student H	12 – 0	1 – 0	4 – 0	0 – 0
Student I	4 – 1	0 – 0	0 – 0	0 – 0
Student J	5 – 0	3 – 0	0 – 0	1 – 1
Student K	6 – 4	6 – 0	4 – 0	0 – 0
Student L	8 – 2	17 – 5	0 – 0	6 – 13
Student M	1 – 0	2 – 0	0 – 0	0 – 0
Student N	4 – 5	1 – 0	0 – 4	1 – 1

Student O	1 – 1	0 – 0	0 – 0	0 – 0
Student P	2 – 8	3 – 1	0 – 3	0 - 0

The number of occurrences of the four behaviors together was also totaled for each individual student. This information can be seen in Table 4. These totals reflect pre and post intervention occurrences. The difference in occurrences was also calculated. The percentage was calculated to show the amount of decrease or increase of behaviors exhibited by each student during reading together time.

Table 4

Difference in Behavioral Occurrences from Pre to Post Intervention

Names	Pre-Intervention	Post-Intervention	Difference	Percent Decrease
Student A	30	14	16	53%
Student B	30	4	26	87%
Student C	11	3	8	73%
Student D	17	13	4	24%
Student E	6	1	5	83%
Student F	10	6	4	40%
Student G	13	4	9	69%
Student H	17	0	17	100%
Student I	4	1	3	75%
Student J	9	1	8	89%
Student K	16	4	12	75%

Student L	31	20	11	35%
Student M	3	0	3	100%
Student N	6	10	+4	67% increase
Student O	1	1	0	0%
Student P	5	12	+7	140% increase

Student N and Student P were the only two students that did not show improvement. Student N had a 67% increase in production of the specific behaviors observed. This student had more occurrences of not looking in the direction of the book and reader. Student N also had more occurrences of touching other objects instead of keeping hands in lap during reading together. Based on teacher researcher memos, this student spent time looking at and fidgeting with shoes and shoe strings that were consistently coming untied.

Student P had a 140% increase in production of the specific behaviors observed. These results could indicate that this student was often not focused during the whole group social story intervention. This student was also frequently absent during reading together time. When this student was present, she spent much of this time laying on the carpet and napping. It was reported by this student that she was staying up late.

Student H and Student M both showed 100% decrease of the production of these specific behaviors observed. Both students are female. These two students were present during the intervention days. Based on teacher researcher memos, these students did engage with the story and participate in appropriate discussions with peers about the story. Student H and Student M can verbally communicate whole group reading together expectations.

Student O showed 0% change in the production of behaviors. However, this student only exhibited one of the specific behaviors pre and post intervention. Student O is female. Based on teacher researcher memos, this student looked at the story and verbally responded to questions asked about the story. This student also listened to and spoke with peers about the story during reading together time. Student O showed high ability to self-regulate during whole group reading together.

Student D showed a 24% decrease in the production of the specific observed behaviors. Although this was the lowest percentage decrease (aside from 0%), this student did make progress with exhibiting more positive behaviors during whole group time. This student is male. Student D also receives additional support focusing on social, emotional, and academic skills. This student was also absent during four days of the intervention.

Discussion

Summary of Major Findings

The findings of this action research suggest that consistent use of a social story can help improve positive behaviors in kindergarten students during whole group reading together time. The data shows that although students are in the same kindergarten classroom, they are at different levels of development when considering self-regulatory skills. The findings suggest that most students showed progress in improving these skills, but the progress made was different for each individual student. Self-regulatory skills are developed at different rates and times for different children. The data does strongly support that the whole group social story intervention caused a decrease of negative behaviors overall. With ten students exhibiting more than a 50% decrease in negative behaviors, the data strongly supports the use of an intentional, consistent, and purposefully planned instruction involving self-regulatory skills for all students in this age

group. These findings also suggest that like the ability to understand and apply reading and math content, the ability to self-regulate can be increased when given appropriate attention and intervention. It is apparent that without the ability to self-regulate, students also begin to lack the ability to gain necessary academic knowledge. This data supports the importance of attention and effort being placed on self-regulation development by all districts in the early childhood settings. The whole group social story intervention supported the increase of self-regulatory behaviors of kindergarten students during reading together time. As the data shows a significant and positive increase in self-regulation behaviors, it also supports that importance of providing developmentally appropriate instruction and intervention. For kindergarten students to gain foundational self-regulation skills, they need to be able to easily engage with and relate to their learning. These findings ultimately suggest that a developmentally appropriate whole group social story written with clear and concrete expectations can be a beneficial tool to help assist in the development of self-regulation in the kindergarten classroom.

Limitations of the Study

One of the limitations of this study was that it was conducted during the last two months of the school year. If this study was completed at the beginning or middle of the school year, the pre and post intervention data might look different as students would have had different amounts of exposure time to learning self-regulation skills. Another limitation is that the total study only lasted six weeks. Data was only collected briefly, two weeks including pre and post intervention. The intervention only lasted for four weeks total. The data collection and intervention were only conducted within one kindergarten classroom. It might be beneficial to have a control and experimental group to compare the effectiveness of the whole group social story intervention. Another limitation could involve the time of day that reading together time is scheduled within

the classroom. There were some days that due to weather, students had indoor recess prior to reading together instead of going out to the playground as was the normal routine. An additional limitation could be the interest level of each student during the whole group reading together time. The selection of books during this action research involved nonfiction books focusing on travel, transportation, careers, and animals.

Further Study

Suggestions for further study and research include implementing the social story at the beginning of the year and collecting data over a longer time frame. It would be beneficial to implement data collection and the social story intervention in more than one classroom and more than one grade level to determine effectiveness. It is also suggested that early childhood staff participate in quality professional development to gain knowledge of the importance of helping children to develop self-regulatory skills. Early childhood staff needs to understand that many academic skills cannot be successfully introduced or learned when students are not yet able to self-regulate. It would also be beneficial to provide this professional development so school districts' specialists, special education departments, and student assistance teams are well versed and knowledgeable when reviewing behavioral data and determining next steps. Classroom teachers also need to be supported in finding protected and respected time to implement appropriate instruction. Schools need to be intentional about providing the supportive environment where all students can learn and practice these crucial self-regulation skills.

Conclusion

The findings of this action research indicate that consistent implementation of a whole group social story does have a positive impact on the self-regulation behaviors of kindergarten students during whole group reading together time. The kindergarten students that participated

in this action research study showed significant improvement in their behaviors during whole group time. They only received three days of social story intervention every week for four weeks. The teacher researcher agrees that self-regulation skills do play a significant role in academic achievement (Montroy et al., 2016). It is vital that policymakers, researchers, educators, administrators, and parents understand the importance of the development of self-regulation skills. Tasks and activities that support these skills need to be included and encouraged specifically within the early childhood classroom settings. For young children to begin engaging with, understanding, and applying academic content, they will first need to have focus, recall, and be able to utilize their working memory. This is not a developmental process that can be ignored or rushed. Classroom educators need to understand each individual student's level of self-regulation and work with them from their current level. Administrators and specialists need to be open in listening to the educators' concerns and proactively seeking resources and strategies to help benefit all students. It is surprising how one small revision or change within a classroom intended for one young student will benefit the whole class in terms of social and academic success. Self-regulatory skills are not learned naturally or in one day. They must be introduced, modeled, practiced repeatedly, and applied in different situations across multiple settings. Early childhood educators and caregivers need to show up with the knowledge, the tools, the teamwork, and the patience to provide opportunities for children to develop these skills. It is with these very necessary self-regulatory skills that children will be able to more confidently interact with others and achieve inside and outside of the classroom environment.

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