Summer 8-3-2019

Self-Monitoring Interventions for Elementary Students With Emotional/Behavioral Disorders and the Effects on Improving On-Task Behavior

Lauren Hayes
bs0475lo@go.minnstate.edu

Self-Monitoring Interventions for Elementary Students With Emotional/Behavioral Disorders and the Effects on Improving On-Task Behavior

A Project Presented to
The Graduate Faculty of
Minnesota State University Moorhead

By

Lauren Hayes

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in
Special Education

May 2019

Moorhead, Minnesota

Abstract

Self-monitoring is a technique used for students that allows them to pay close attention to their own behavior. Self-monitoring consists of two parts; students tracking their own data and comparing data to their previous data in order to see improvement in their behavior. Explicitly teaching students self-monitoring skills promotes independence and responsibility for ones own actions. Learning these skills is essential for students with behavioral problems. Provided is a literature review and research on the effects of self-monitoring interventions for elementary students with emotional/behavioral disorders. Careful analysis of the data showed that five of the seven students showed an overall improvement in the amount of time spent on-task during a 60-minute literacy block through the implementation of a self-monitoring intervention. One student did not show consistent improvement and another opted out midway through the study.

Acknowledgements

I would like to acknowledge the important people who helped me make this possible. Thank you to my knowledgeable advisor, Dr. Suarez-Sousa, for your continued guidance throughout this journey. Thank you to my amazing parents and wonderful boyfriend for your unconditional love and support throughout all of my journeys. You are all greatly appreciated.

Table of Contents

Chapter One - Introduction

General Problem or Issue

Self-determination skills have become an important area of study throughout the years. Self-determination is a concept that refers to the belief that every child can improve their quality of life by achieving independence and having the ability to reflect on their own actions and choices. There are multiple sub-categories of self-determination including choice making, decision making, goal setting, self advocacy, self-management, and self-monitoring. Teaching students who are at risk or have disabilities self-determination skills have become increasingly important. It is important for these skills to be promoted throughout a student's educational career as these are necessary for them to be successful in life after high school.

For my action research I studied the effects of self-monitoring interventions on elementary students with Emotional/Behavioral disorders. Over the duration of my teaching career I have watched multiple teachers manage students using behavior charts. In the district I previously taught in, the students carried behavior charts with them to every class, and the cooperating teacher filled out the chart for the respective time period at the end of class. The problem with that method is that it does not allow the students to reflect on their own behavior. Another concern I have for this particular method comes from the inconsistency of teacher expectations. One teacher may allow certain behaviors while another may find them undesirable, which in my opinion, teaches the students that they are able to get away with unacceptable behaviors depending on who is in charge at that particular time. Rather than teaching students to push their limits depending on their

environment, I decided to research the effects of teaching students to self-monitor their behavior in all settings and assume responsibility for their actions. Previous research has shown that implementing self-monitoring interventions with students with emotional/behavioral disorders has had many positive outcomes and teaches the students to be more independent and aware of their actions. Bruhn and Colleagues (2015) found that 41 studies included in their comprehensive review of self-monitoring reported positive effects for students with behavior problems when self-monitoring interventions were implemented. It can also improve specific skills such as staying on task, complying with teacher requests, completing work, and using positive statements when interacting with others. "Self-monitoring for attention is intended to improve behavior so that the student is able to appropriately attend to the academic task" (Cook, Rao, & Collins, 2017, p.22).

I chose this topic of research because working with children with emotional/behavioral disorders is a passion of mine. In the school district I previously taught in, the only means of monitoring behavior was through the use of behavior charts. I have witnessed the results and lack of improvement in behaviors first hand. This past school year (2018-2019) I transferred school districts and began teaching students with emotional/behavioral disorders in a self contained classroom. This study is personal to me as I genuinely want to see my students grow into independent, successful adults with integrity and the ability to reflect upon their own actions and accept the respective consequences that come with those actions. I have read many research articles about the positive effects of

implementing self-monitoring interventions into special education classrooms and was anxious to study the effects of its implementation myself.

Subjects and Settings

Description of subjects. The participants in this study were seven students with emotional/behavioral disorders who were placed in a self-contained classroom. Of the seven students participating in this study, two of them were White; all others were Native American. The grade level of these students ranged from 4th to 6th grade. Six of the students in this study were male and one student was female. To my knowledge, six of the students were part of low-income families. Only one of the students lived in a two-parent household; the others lived in one-parent households or with relatives other than their biological parents. All of the participants in this study were on an Individualized Education Plan (IEP) and had a Behavioral Interventions Plan (BIP) on said IEP. All students received free lunch.

Selection of criteria. These students had all been identified as having emotional/behavioral disorders and had been placed in a self-contained classroom due to the severity of their behaviors. Because of the focus of the effect of implementing self-monitoring interventions on student behavior and the fact that I had been working with them daily, they appeared to be the obvious choice.

Description of setting. This study took place in an elementary setting in a small, rural, central Minnesota town. The district I teach within is an educational co-op that provides special education services to the surrounding school districts. The students in my class were bussed to me daily from other surrounding school districts as they require a self-contained classroom environment. All of the school

districts are also located in rural communities in central Minnesota [The majority of the school districts within the coop have a high Caucasian population, with the exception of one school]. The exceptional school is located on an Indian Reservation and has a high population of Native American students. There are approximately 40 students enrolled in our federal setting IV programs. All other areas of special education are serviced through their own school districts. 75% of the students enrolled in the setting IV programs are Native American, 10% are African American, and 15% are Caucasian. 83% of the students enrolled in Midstate Education District receive free lunch. The participants received their education in a small, tight-knit, farming community that is composed of mostly White individuals.

Informed consent. Permission of this study was obtained from the Institutional Review Board at Minnesota State University Moorhead and from Midstate Education District where this study was conducted. The school district's IRB procedure was followed to obtain permission to conduct my research. I also obtained permission from my direct supervisor, and the executive director of Midstate Education District. Protection of human subject participants in this research was assured. The participants and their parents/guardians were informed of the purpose of the research and all procedures required of the participant, including a disclosure of any risks or benefits. Parents were provided a signed written consent form. Confidentiality was protected through the use of pseudonyms without identifying information. The choice to participate or withdraw could be made at anytime by either the participant or the parent/guardian.

Chapter Two – Literature Review

Review of Literature

As an educator of students with emotional/behavioral disorders I am continuously trying to find the most effective way to manage my students' behaviors. I began researching interventions that may be effective in terms of improving student behavior. I quickly became intrigued with the effects of self-monitoring behavior interventions opposed to the teacher-monitored behavior charts I had previously been using.

Body of the Review. As I transferred districts in fall of 2018 and began working solely with students with emotional/behavioral disorders, I began researching multiple interventions that may be effective in terms of improving student behavior. I quickly became intrigued with the effects of self-monitoring behavior interventions opposed to the teacher-monitored behavior charts I had previously been using:

> Explicitly teaching skills associated with self-determination has been promoted to support students' independence and control over their own lives. This is especially important for students with behavior problems. One self-determination skill or behavior that has been studied widely is self-monitoring (Bruhn, McDaniel, & Kreigh, 2015, p. 102).

Self-monitoring is a concept that promotes independence, responsible behaviors, and positive coping abilities while increasing on-task behavior, productivity, and self-awareness and reflection. Many students that are identified as having emotional/behavioral disorders lack self-monitoring skills that are vital in order to be successful in the real world after high school. Self-monitoring of attention has proved to be an effective intervention for students with a serious emotional disturbance and have also helped improve academic performance (Otero & Haut, 2016).

As a special education teacher who teaches students with emotional/behavioral disorders, I realize the importance of these students learning to self-monitor their behavior. Self-monitoring can have positive benefits on both behavior and academics by teaching the students to reflect on their actions and determine choices that will result in positive consequences:

> The results of five single-subject studies showed that adolescents with learning disabilities could successfully implement self-monitoring procedures in special and regular education settings and correspondingly improve their on-task behavior (Prater, Joy, Chilman, Temple, & Miller, 1991, p.164).

Self-monitoring can also be successfully used with special education students to improve social behavior. Many students have learned how to engage with their peers and teachers positively through the use of self-monitoring. During this study, I would like to determine the effects that self-monitoring interventions have on

increasing on-task behavior. Although off task behavior can be demonstrated in a variety of ways, all of my students participate in off task behaviors daily. Some of the off task behaviors I see I my classroom include shutting down, talking to classmates, walking around the room and laying on the floor. Although I want to improve the amount of time that all of my students are on task, I also want to make sure that each student' self-monitoring interventions is individualized. In order to individualize the interventions, I will use the students' current Functional Behavior Assessment (FBA) to determine their area of focus. For example, all students will be working toward improving the amount of time they spend on task, but one student may be focusing on staying in their seat, while another is working toward decreasing the amount of time they talk to their classmates during class. An FBA is a process that helps determine a students target behavior, the purpose of the target behavior, and the events that predict and maintain a students problem behavior. By determining the students target behavior and the purpose of the behavior educational personnel can then use that information in order to devise an intervention that is appropriate for the student.

By teaching students with emotional/behavioral disorders how to self-monitor, it not only sets them up and prepares them for a more successful future, but also benefits the other students in the class as well. "Trying to manage the problem behaviors of one or two students in the classroom can take teachers away from valuable instructional time with students" (Sheffield & Waller, 2010, p. 7). When these students are able to monitor themselves and their behaviors more effectively, there is more time provided for the educator to focus on instruction

rather than consistently battling undesirable behaviors. Essentially, self-monitoring consists of monitoring one's behavior by keeping track of how often the target behavior occurs and tracking the occurrence of the behavior on a chart at predetermined times during a designated class period as an intervention to reduce problematic behaviors (Sheffield & Waller, 2010). After tracking the target behavior during the predetermined times, the student will reflect on their behavior by graphing how many times the behavior was demonstrated during that particular time. The graph will be a visual representation of how the students' behavior has increased or decreased over time.

Self-monitoring behavior involves two steps for the student. They are expected to 1) monitor their behavior to determine if a specific behavior has occurred and 2) record the occurrence of the behavior. Self-monitoring interventions can be implemented in the classrooms many different ways. Different methods used to self-monitor include using cards, sheets, forms, or checklists to record on-task behavior or other data. Reinforcement can also be implemented along with self-monitoring. "Self-monitoring with reinforcement includes the same steps as self-monitoring while also rewarding accuracy in self-monitoring with positive reinforcement, such as tangibles or extra free time" (Sheffield & Waller, 2010, p. 10). Additionally, when students are able to monitor and regulate their own on-task behavior, they are found to be more successful as they are able to be productive during times that teacher support is not available. By graphing their own data, students are able to self reflect on their own behavior. The graph provides the students with a visual to determine whether or not their behaviors are

improving and if they are on track to meet their individual goals in order to earn the given incentive. Over time, the students and teacher should see an improvement on on-task behaviors during class such as sitting at their desk and working on the assignment.

Research has also shown that technology can be useful and beneficial when implementing self-monitoring into the classroom. “Mobile technology-based self-monitoring exemplifies key features of tier 2 interventions such as being readily available and easy to implement” (Bruhn, Woods-Groves, Fernando, Taehoon Choi, & Troughton, 2017, p. 120). An effective technology application known as MotivAider[R], is one of various technologies used to help the implementation of self-monitoring. MotivAider[R] is used to cue students to self-monitor throughout the intervention process. The MotivAider[R] is a small device that attaches to a belt or a waistband. It sends out a pulsing vibration, which is used as the cue for participants to self-monitor their behavior. MotivAider[R] is cost effective, easy to use, and can also help monitor the consistency of self-monitoring in the classroom. “Findings suggest that not only is technology-based self-monitoring effective in improving various behavior, but it is also viewed positively by teachers and students” (Bruhn, Woods-Groves, Fernando, Taehoon Choi, & Troughton, 2017, p. 121).

A second technology-based procedure to assist with the implementation of self-monitoring in the classroom is known as the Auto-Graph app. According to Jull (2006), Auto-Graph is a student behavior self-monitoring and feedback technique that involves the use of a computer application. Following an incident of undesirable

behavior, students are prompted by the teacher to respond to questions pertaining to the identified behavior incident using a checklist. Students record this information with the help of the Auto-Graph computer application, which then constructs a behavior record. Upon completion of each new behavior record, data are processed and reported back to the student in the form of graphs that are indented for the student to use for self-reflection. (p. 18-19). The teacher will guide the student through the reflection process while helping the student determine a few acceptable replacement behaviors that can be used for future reference.

The use of iPads and the application SCORE IT have also proved to be beneficial when it comes to the effects of using self-monitoring interventions. SCORE IT allows students and teachers to rate specific behaviors and assists students with monitoring their own behavior. "SCORE IT improved the academic engagement of adolescent students who displayed off task behavior" (Vogelgesang, Bruhn, Coghill-Behrends, Kern, & Troughton, 2016, p. 493). SCORE IT is an easy to use application that students enjoy to use as they can use an iPad rather than a pen and paper. Using technology as part of the intervention helps keep the students engaged and focused on their goal and it is a great visual to help them monitor their growth.

Hypothesis Statement. My hypothesis is that using information from the FBA and implementing self-monitoring interventions will be more effective than other teacher-given consequences and that there will be a decrease in undesirable behavior. The reviewed research has shown ample benefits to implementing self-monitoring strategies including increased on-task behavior, a decrease in

undesirable behavior, and developing self-monitoring skills that will assist them throughout adulthood as well.

Chapter 3 - Methodology

Research Questions

The purpose of this study was to determine the effects of implementing self-monitoring interventions on improving on-task behavior. Although there is ample research showing the positive effects self-monitoring has on behavior, I wanted to see if it has the same positive effects when implemented in a self-contained EBD classroom. I was very interested to see how this particular intervention could improve the behavior in my classroom and benefit my students.

As a teacher of elementary students with emotional/behavioral disorders, I knew that the lack of independency and ability to self-monitor one's own behavior was an issue for these students. I was curious to see if the implementation of self-monitoring interventions would prove to be as successful in my classroom as it has been successful in reducing challenging behaviors. Because of this curiosity, I formulated this question:

1. Although self-monitoring has proved to be effective in multiple different scenarios, will it prove to be as effective in a self-contained classroom?

Answering the above question would allow for a better understanding of the implementation of self-monitoring interventions and allow me, as well as other educators, to determine if this is a strategy we would like to continue to implement.

Research Plans

Methods and rationale. I conducted my action research within my own classroom. This intervention was implemented as part of the students' daily routine. The students learned to self-monitor their own behavior through the use of prompts

as reminders to self-monitor and self-monitoring charts to track their behavior. Each student was given a target behavior to focus on based on his or her individual needs. Although the students focused on different target behaviors, the self-monitoring charts and the frequency at which they chart their behavior were consistent throughout the entire class.

I documented data on the students' self-monitoring chart as well in order to allow the student to be sure they were recording their data accurately. I also collected data based on the students' self-monitoring charts. The number of occurrences of the target behavior was accumulated weekly in order to determine whether or not the number of occurrences was decreasing each week.

The instruments clearly measured to what frequency the child's target behavior was observed. In order to test the effectiveness of this study, the weekly-cumulated results were graphed for each child. In order to confirm my hypothesis, the target behavior had to occur less often over the course of the study.

Table 1 lists the students involved with this study and their target behaviors.

Table 1

Student Target Behaviors

Student	Gender	Target Behavior
Student #1	Female	On-Task
Student #2	Male	On-Task
Student #3	Male	On-Task
Student #4	Male	On-Task
Student #5	Male	On-Task
Student #6	Male	On-Task
Student #7	Male	On-Task

Schedule. For four weeks prior to this study beginning, I used only teacher-monitored behavior charts in my classroom and collected pre-intervention behavioral data before beginning the study. During to the week previous to implementing my study, I also provided instruction in order to teach my students what self-monitoring is and why it is a critical skill for them to develop. We also worked together as a class to create a visual aide that helped remind students of what exactly on and off-task behaviors looked like. In addition to the visual aide we had created, the students also practiced determining whether or not they were on task during the week prior to the intervention and during multiple other subjects throughout the day during the intervention, as I wanted to be sure that the students were aware of and fully understood their expectations. After four weeks, I implemented the self-monitoring intervention into my classroom and began

collecting data immediately and continued to do so through the remainder of the semester. I felt the data would show very little effectiveness at first as the children were adjusting to the new intervention, however, I hoped to see a change by the end of the semester. The reasoning for implementing the study over the duration of an entire semester was to gain a solid understanding of how effective this intervention may be if it is used as the primary intervention and behavioral routine throughout upcoming school years.

Conclusion. Before conducting this study, I used a teacher led behavior management system for a total of four weeks. During the fourth week I collected my baseline data to use in comparison to the data I collected during the study. In hopes of improving the amount of time my students spend on-task during a 60-minute reading block, I implemented a self-monitoring intervention that allowed my students to learn to recognize and reflect on their own behavior. The students monitored their behavior by documenting the amount of time they spend on-task during a literacy block by using a self-monitoring checklist. The students documented their behavior a total of six times during the one-hour language arts block for a total of six weeks.

Chapter 4 – Results

Data collection. The research question that guided my study was, although self-monitoring has proved to be effective in multiple different scenarios, will it prove to be as effective in a self-contained classroom? My hopes for this study was to find an intervention that was beneficial in a level IV, EBD classroom and would help improve student behavior.

The purpose of this study was to determine the effects that self-monitoring interventions for elementary students with Emotional Behavior Disorders had on improving on-task behavior. Because I teach in a self-contained, level IV, EBD setting, many of the students have a difficult time staying on task for an hour literacy block. Although there are a variety of reasons for not staying on task, such as frustration, defiance, and other medical diagnoses, all of the students in my classroom could benefit academically from improving the amount of time spent on task before starting my research, I gathered baseline data to determine how much time each of my students spent on task during a 60-minute language arts block. After collecting baseline data, I began to implement the self-monitoring intervention, which consisted of the students using a simple self-monitoring chart to determine how often they were on task during the language arts block. The 60-minute block was broken up into 10 minute intervals, so the students documented whether or not they were on task a total of 6 times during the block. During this period, a timer was set and would indicate when it was time for the students to document their data. The self-monitoring checklist (see Appendix A) also had a spot so I could determine if they were on task as well. Each student was given a goal to

work toward, and was given a personalized incentive for reaching said goal. The incentives the students chose included extra time on electronics, free time with a staff member of their choice, a free toy from the school store, and additional recess time. The on-task behavior that the students were expected to demonstrate consisted of being in their seats and actively working on the assigned task either independently or with the help of a staff member. Off-task behavior included, but was not limited to, leaving their seats or classroom, shutting down, throwing tantrums, and talking to classmates about unrelated topics. The students worked toward their goal by earning stickers for being on-task and by documenting their behavior correctly. For example, if they marked a sad face indicating that they were off task, and I documented off-task behavior as well, they would still earn a sticker toward their desired incentive. My reasoning behind this was to ensure that they would be honest and practice being mindful about their behavior, rather than indicating they were on-task in order to reach their goal faster, without learning to monitor their behavior. As mentioned previously, "Self-monitoring with reinforcement includes the same steps as self-monitoring while also rewarding accuracy in self-monitoring with positive reinforcement, such as tangibles or extra free time" (Sheffield & Waller, 2010, p. 10).

The research question was, although self-monitoring has proved to be effective in multiple different scenarios, will it prove to be as effective in a self-contained classroom? For one week prior to starting my research I collected baseline data that represented the average amount of time during a 1-hour literacy block that my students each spent on-task. During this period I documented student

behavior in 10-minute intervals just as I had the students document their behavior during the study. Figure 1 shows the average amount of time spent on task during a 60-minute language arts block before implementing the intervention.

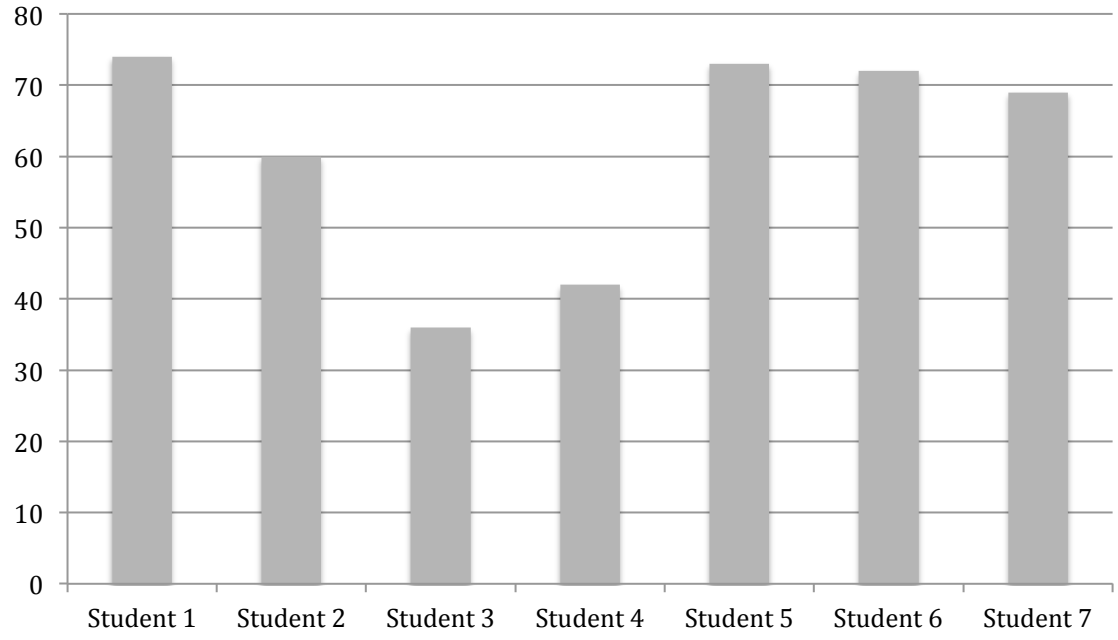

Figure 1. The average percent of time spent on task before the intervention using a total of 30 data points per student

When I first explained the concept of my research to my students, they all agreed to partake in the process. I implemented the intervention into my classroom and saw immediate improvement in the amount of time my students spent on task. The students were all highly motivated by the incentives and appeared to be excited to start the process. Over the next couple of weeks, their excitement began to fade as the intervention process settled in as part of our daily routine. By the beginning of week 3 I began to see a decrease in on-task behavior at which point I had to adjust some goals and incentives in order to re-motivate my students in this process. In addition, student #4 decided to opt out of this process entirely. Although I saw the

most improvement during the first week, I understand that the process was especially motivating at that point as the students had chosen personalized incentives and had not yet experienced any frustrations with the process thus far. After 6 weeks of implementing the intervention and working hard to keep the students motivated in the process, I was pleased to see that most of the students had still made positive improvements in the overall amount of time spent on-task.

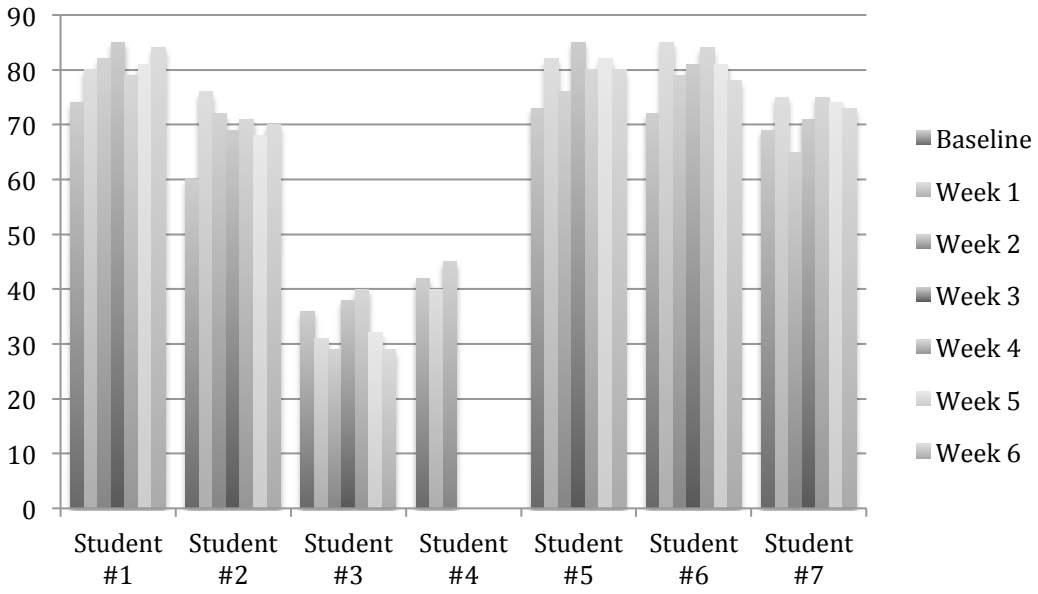

Figure 2. The average percent of time spent on task after the intervention

Data analysis. As with all interventions, they have different effects with different students. I was pleased to see that the overall amount of time spent on-task had gone up, however, I was discouraged by the little effect it had on the more challenging students. I was truly hoping that this intervention would be motivating to the more challenging students as they are greatly behind academically and their behaviors highly affect the rest of the class. As mentioned in the above research, self-monitoring has been proved to be an effective intervention for students with a serious emotional disturbance and have improved academic performance (Otero &

Haut, 2016). This information gave me high expectations and left me hopeful that this intervention would be beneficial to all of my students. However, student #3 and student #4 did not show the amount of improvement I had hoped to see. Student #3 comes from a trauma-filled home including abuse and drug use. Student #3 is chronically absent and when the student is present, the majority of the student's day is spent sleeping. Because of the amount of class-time missed, student #3 did not have an equal opportunity to show improvement. Student #4 is incredibly defiant. The student agreed to participate in the intervention, but often times ripped up the tracking sheet or refused to fill it out before opting out of the intervention entirely. Although the data was collected in order to document the amount of time spent on-task, it was also beneficial in helping indicate other behavior patterns as well. For example, I was able to see that one student spent more time-off task than usual during days that he had to attend therapy. In the future, I hope to use the data that is collected during self-monitoring interventions to help me understand my students' behavior patterns and to adjust my own instruction based on their behavior. By being aware of the students' behavior patterns, I will be able to determine things such as what instructional strategies keep the students engaged and how long they are able to focus on a specific task before needing a break. In addition, for future reference, I would refrain from using a tracking sheet with smile faces and frown faces. I originally selected the system used due to its simplicity in attempt to avoid frustration, however, many of my students shut down or became frustrated if they had to select the frowning face. It appeared to give them a sense of failure. In order to reduce that reaction, I would choose a different tracking system in the future.

Conclusion. I am satisfied with the overall results of my research. I am impressed to see that the majority of my students have increased the amount of time they spend on-task during the literacy block each day. Because this intervention was overall effective and easy to implement, I do see this being an intervention I can continue to use in the future for a variety of negative behaviors that are demonstrated in my classroom.

Chapter 5 – Implications for Practice

Implications for Practice

Action plan. Implementing self-monitoring interventions was and will continue to be a part of my classroom management routine. Research indicates that using self-monitoring interventions has many positive benefits, and although it did not show positive results with all of my students, I was impressed with the overall growth in my classroom. I firmly believe that being aware of ones own actions is a critical skill for all students to develop in order to be successful. Additionally, not only does self-monitoring help improve behavior, but it can have a positive effect on academics and the overall classroom environment by providing students with a skill that will allow them to be more self-sufficient. I also appreciate how simple and versatile self-monitoring can be. It does not need to be a complex and time consuming task in order for it to be effective and it can be tailored to fit any behaviors. As a special education teacher, I feel this intervention could be extremely beneficial to a school environment. Because of its simplicity, self-monitoring would be a wonderful intervention to implement for a student who goes to multiple different classes a day, or goes between a general education classroom and a resource room. As long as the teachers clearly communicate expectations and be consistent, the student could work toward his or her goals and practice self-monitoring in multiple different settings throughout the day. I plan to continue to use self-monitoring interventions in my classroom and continue to work on ways to continue to motivate my students in being involved in this process. In the future, given the necessary technology is available; I would love to try a self-monitoring

app. I am curious to see if the results vary between using technology rather the pen and paper and my students are highly motivated by technology.

Plan for sharing. The intervention that I used in my classroom that I found positively impacted the amount of time my students stay on-task could be incorporated into any classroom. I would be willing to share the steps to implementing this intervention with any teacher who is interested in learning more about behavior interventions and teaching their students to monitor their own actions.

I will begin to share these results with my professional learning community that consists of other special education teachers, a behavioral analyst, and principal.

Going forth, I will use the information I found when implementing a self-monitoring intervention in my classroom and provide advice to new teachers in the profession.

Appendix A

_____'s Self Monitoring Chart

Date:_____

Today's Goal
Target Behavior: _____
_____Teacher rated smiley Faces # of Matches_____

Subject Area/Time of Day	Teacher Rating (circle one)	Student Rating (circle one)	Do they match? (circle one)
			Yes No
			Yes No
			Yes No
			Yes No
			Yes No
			Yes No
Number of Smiley Faces			# of Matches=____

References

Amato-Zech, N. A., Hoff, K. E., & Doepke, K. J. (2006). Increasing on-task behavior in the classroom: Extension of self-monitoring strategies. *Psychology In The Schools, 43*(2), 211-221.

Bruhn, A., McDaniel, S., & Kreigh, C. (2015). Self-monitoring interventions for students with behavior problems: A systematic review of current research. *Behavioral Disorders, 40*(2), 102-121.

Bruhn, A.L., Woods-Groves, S., Fernando, J., Taehoon Choi & Troughton, L. (2017). Evaluating technology-based self-monitoring as a tier 2 intervention across middle school settings. *Behavioral Disorders, 42(3), 119-131.*

Cook, S.C., Rao, K., & Collins, L. (2017). Self-monitoring interventions for students with EBD: applying UDL to a research-based practice. *Beyond Behavior, 26(1), 19-27.*

Jull, S. K. (2006). Auto-Graph: Considering the utility of student behavior self-monitoring for inclusive schools. *Journal Of Research In Special Educational Needs, 6*(1), 17-30.

Otero, T. L., & Haut, J. M. (2016). Differential effects of reinforcement on the self-monitoring of on-task behavior. *School Psychology Quarterly, 31*(1), 91-103.

Prater, M. A., Joy, R., Chilman, B., Temple, J., & Miller, S. R. (1991). Self-monitoring of on-task behavior by adolescents with learning disabilities. *Learning Disability Quarterly, 14*(3), 164-77.

Prater, M. A. (1992). Using self-monitoring to improve on-task behavior

and academic skills of an adolescent with mild handicaps across special and regular education settings. *Education and Treatment Of Children, 15*(1), 43-55.

Sheffield, K., & Waller, R. J. (2010). A review of single-case studies utilizing self-monitoring interventions to reduce problem classroom behaviors. *Beyond Behavior, 19*(2), 7-13.

Vogelgesang, K. L., Bruhn, A. L., Coghill-Behrends, W. L., Kern, A. M., & Troughton, L. W. (2016). A single-subject study of a technology-based self-monitoring intervention. *Journal Of Behavioral Education, 25*(4), 478-497.