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Rebecca Armijo

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The Effects of Music Therapy on Social Behaviors
of African American Males with
Emotional Behavior Disability in Elementary School

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A Graduate Field Experience
Submitted in Partial Fulfillment of the
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Abstract

The purpose of this study was to determine if music therapy had an effect on behavior of students with emotional behavior disorder during independent work time. In order to prove this hypothesis, suspension/incident referral data, pre and post-surveys, as well as tally and anecdotal behavior collection were discussed and analyzed. Prior to the intervention, the students were regularly showing negative behaviors as supported by the suspension and incident referral data and behavioral data from week one in the intervention. In the suspension and incident referral data, all students decreased their referrals/suspensions post-intervention. Students self-identified their progress with the use of the pre and post-survey. Where every student identified growth in at least two areas of behavior. In addition, the behavioral data showed dramatic increases in positive behavior and decreases in negative behavior throughout the eight-week period in all observed behaviors. On average, every student was engaging in positive behaviors over 80 percent of the 30-minute intervention time. Over all the various data collections, each student made positive progress in their own individual way. The behavioral data was essential to at the core of identifying if the music therapy was successful. This data indicates that music therapy did have an effect on the increase of positive behaviors and the decrease of negative behaviors for students with emotional behavior disorder during independent work time.

Table of Contents

Signature Page.....	2
Abstract.....	3
Table of Contents.....	4
Chapter One: Introduction	6
Purpose of the Study.....	6
School Description	6
Description of Participant.....	7
Connection to Special Education Law.....	7
Conclusion.....	8
Chapter Two: A Review of Literature.....	9
Introduction.....	9
Music’s Effect on Social Behaviors.....	10
Types of Music and Emotions.....	15
Music’s Effect on Academic Behaviors	18
Differences in Social Behaviors and Emotions.....	23
Conclusion.....	26
Chapter Three: Methodology.....	28
Introduction.....	28
Student Description.....	28
Setting	29
Sample Population.....	29
Overview of Procedures.....	30
Intervention Design.....	32
Conclusion.....	34

Chapter Four: Results.....	35
Introduction.....	35
Overview and Data Collection.....	35
Suspension/Incident Referral Data.....	35
Survey Data.....	37
Behavioral Data.....	42
Conclusion.....	45
Chapter Five: Conclusion.....	46
Introduction.....	46
Connections to Existing Research.....	46
Explanation of Results.....	50
Suspension/Incident Referral Data.....	51
Pre and Post Survey Data.....	52
Behavioral Data.....	53
Conclusion: Explanation of Results.....	56
Strengths of the Study.....	57
Limitations of the Study.....	59
Recommendations for Future Research.....	59
Conclusion.....	61
References.....	62
Appendix A.....	64
Appendix B.....	65
Appendix C.....	66

CHAPTER ONE: INTRODUCTION

Purpose of the Study

The purpose of this action research project is to determine what effect music therapy has on social behavior in elementary school males with emotional behavior disability in a small classroom environment. The hypothesis reviewed in the study is that music therapy intervention will have a positive effect on the social behaviors (listening, ability to follow directions, ignoring distraction and communication) of males with emotional behavior disability in the small classroom environment.

This study is supported by previous research done by North, Tarrant, and Hargreaves (2004) that discovered people are more likely to exhibit positive, helpful behaviors after listening to uplifting music. By implementing enjoyable music to the participants within the action research, this will promote more positive behaviors. Research completed by Kirschner and Tomasello (2010) revealed that students who create music together engage in more prosocial behaviors. The prosocial behaviors found within the study were helpfulness, social commitment and empathy. These social behaviors are all positive practices to students with emotional behavior disability. This research supports further application of music and stimulating prosocial behaviors. Researching the effects of music in education, and specifically in social behaviors of students in an academic environment may assist in future classrooms and schools as well.

School Description

The school the research was conducted at is within the central region of the Milwaukee Public School district. The classroom in which that research will be taking place is a Comprehensive Behavior Unit (CBU). A Comprehensive Behavior Unit is a specialized

environment for (3-10) students who exhibit the most challenging behaviors. All students within this setting learn essential social skills concurrently with academics. Within the population of the school, the majority (94.7%) of students are African American and 77.8% of families have low socioeconomic status (WISEdash). The school's mission is to work towards efficacy, a minds-on learning approach and real-life application through learning (Monfre, 2014).

Description of Participants

The participants are all young, African American males in grades 3 – 5. The three participants in this study are students in a Comprehensive Behavior Unit. A Comprehensive Behavior Unit is a self-contained classroom for students who receive specialized instruction on social skills concurrently with all academic subjects. Each of the student participants have their own individual challenges with their behavior, and have individual education plans to help assist with specific ways in which to teach and engage with the students.

Connection to Special Education Law

Under the Individuals with Disabilities Education Act (IDEA, 2004), there are four parts that describe various requirements that students with disabilities and their families must receive. , More specifically, in Part D within the IDEA, it describes “national activities to be undertaken to improve the education of children with disabilities.....this section provides resources to support programs, projects and activities which contribute positive results for children with disabilities (IDEA, 1997). While these are programs are national, it is important to recognize how music can play a role in the programs, projects and activities that are created and implemented for children with disabilities and their families; as music therapy may have an effect on the behaviors and mood of the child.

Conclusion

The Five Chapter manuscript is a thorough description of the effects of music therapy on social behaviors. Each chapter has a focus that delves into the many different parts of the study. In Chapter Two, there is a review of the current research methodology and findings. The various studies influenced the ways in which the 8-week intervention was created. Chapter Three breaks down the procedures of the case study, and the intervention design. It also provides a more thorough description of the setting of the intervention and the participants. Chapter Four focuses on the analysis of the results found throughout the study. It gives a landscape for the growth of the participants and describes the changes over time. The final chapter, Five, gives depth to the numerical landscape found in chapter four and includes additional connections to research, anecdotal descriptions of participants' growth, strengths and limitations of the study as well as suggestions for future research in the area of music therapy in and out of the classroom.

CHAPTER TWO: A REVIEW OF LITERATURE

Introduction

There have been numerous studies done on how music affects people. Studies from all over the world discuss the power of music on the human brain. Research expands from music's effects on memory, to speech and language, to health and emotions. Beyond research, people willingly provide their personal testimonies through discussions on feelings, both positive and negative, that derive from simply listening to a song. Music has expansive potential to have an effect on so many things. Unfortunately, there has been a lack of research in music's role in the special education classroom. If music has such a powerful effect on the brain, it has potential to play a crucial role in moving students with special needs towards advocacy and self-regulation. Speaking directly to a specific group within the larger special education population, what effect might music have on students with Emotional Behavior Disorder? According to a study done by Hallam and Price (1998), they inquired if playing background music in a classroom of students with emotional and behavior difficulties would increase positive behavior, and their academic performance in mathematics. When analyzing the data, researchers found "even where the differences were non-significant, the effects of music were always positive" (p.90). Hallam and Price go on to suggest further research in this area to "establish whether these effects can be sustained over time if the music is played on a regular basis" (p.90). Hallam and Price's recommendation of further research, and the extensive research done on the various effects of music, prompt a larger, more specific investigation: What are the effects of music therapy on social behaviors of African American males with Emotional Behavior Disability in elementary school? This question holds importance because of the lack of historical research on this topic and population, as well as the overrepresentation of African American males in special

education. The Department of Education NCES (2000) supports this claim by stating, “African American males are again overly represented accounting for 21% in the area of emotional disturbances” (pg. 4). Therefore, when looking at this population, and understanding the urgency for positive change, it is crucial to also look how music effect’s people positively in a social and academic lens.

Music’s Effect on Social Behaviors

In today’s society, music is everywhere. Music follows humans from the initial stages of life to adulthood. Music sends messages through lyrics, beats, and rhythm. Through research, it is clear that music doesn’t only just make people feel happy or sad, but it encourages particular behaviors.

In the field study done by North, Tarrant and Hargreaves (2004), they inquired: is there a relationship between music and altruism in a natural environment, and if so, what effect does that have on people’s helping behaviors? With that, they formed a hypothesis around previous findings. Their hypothesis is that aversive music would be less likely to elicit helping behavior in comparison to the uplifting music. The researchers created a study with the independent variable being the types of music (“uplifting” vs. “annoying”) and the dependent variable being the likelihood of helping behavior amongst the participants.

The participants in this study consisted of the visitors of two gyms at a university in the United Kingdom. There were 646 participants, of that, 366 were males and 280 were females with a mean age of 24.63. All participants completed an orientation training organized by the gym.

While exercising, participants listened to either “uplifting” or “annoying” music for a matter of two days. The “uplifting” music was popular high-tempo British singles. The “annoying” music was unconventional computer music. The music never repeated itself to guarantee the participants did not hear the same song twice. A high-quality stereo system was used to allow the music to be played throughout the entire gym. The gyms were very alike, as they had the same type of equipment, the equal number of staff and were under ownership of the university. To ensure validity in the numbers of participants, the gym users were asked to sign in and sign out. When signing out, the experimenters introduced either a low-cost or high-cost task related to supporting a fabricated charity posted in the gym. The false charity’s goal was to expand admittance to athletics for those with disabilities and to increase funding from the government. The low-cost task participants were prompted to sign a petition and fill out basic personal information while rating the music and their mood. Participants rated the music on a scale of 0 to 10. Zero, signifying the music was very annoying, and ten meaning it was very uplifting. When rating their mood, zero stood for very annoyed whereas ten indicated happiness. Upon the participant providing this information, a researcher marked whether that participant signed the petition to support the charity or not.

A high-cost task was introduced to participants as well. The high-cost task included the participants receiving a sheet explaining how students at the university would be supporting the charity, and asking for help in distributing flyers to assist in increasing awareness in that area. The participants were given 10 dates to choose from, and in the case they agreed to help they would provide their contact information. Despite the participants committing to help or not, they provided the same personal information and ratings that those who participated in the low-cost task did. Seventy-three participants were removed from the trial because they had heard about

the study and charity the day prior. In addition, three participants in the gym inquired about the music and were also removed from the study after being informed of the research.

When analyzing the data, the researchers found that results were significant. The statistics show that, $t(643) = 30.17$, $p < .001$, with means of annoying music = 1.46 (SD = 2.00) and uplifting music = 6.06 (SD = 1.84). The results also showed that the participants did recognize the music to be either annoying or uplifting. The researchers also ran an independent-subjects t test to identify if time spent in the gym affected the recognition of music being either annoying or uplifting. The results were not significant.

The researchers found that no matter the music the participants were exposed to, they would participate in the low-cost task. In regards to the high-cost task and the music exposure, there was an association. If the participants were exposed to the uplifting music, they were more likely to distribute information and participate in the high-cost task. “The data indicate that there was an association between the music played and the number of leaflets that participants were prepared to distribute. Specifically, participants were prepared to distribute more leaflets in the uplifting music condition” (p.272).

Furthermore, music promotes positive social behaviors in a study by Kirschner and Tomasello (2010). They inquired the connection of joint music making and its effect on altruistic behaviors. With support from previous studies, the researchers predicted that engaging in joint music making should make children behave in a more prosocial manner. The independent variables in this study are the condition and the gender of the participants, while the dependent variable is the prosocial behaviors (helping each other or solving a task together instead of alone).

The participants include 96 four to five year-old children (48 males and 48 females). The children were from 16 various urban day-cares in Germany but came from different socioeconomic backgrounds. Kirschner and Tomasello put the children into pairs based on the day-care they attended so previous interactions were had. The final sample size included 48 pairs, 12 pairs for each condition-gender combination.

Kirschner and Tomasello conducted their research by pairing the participants together to ensure previous interaction, while keeping the pairs randomly assigned to one of the two conditions. The children within the study were not aware that they were participants. The participant pairs began with 3 minutes of collaborative play. The pairs either interacted with one another in the presence of a musical condition or a non-musical condition. The musical condition included listening to traditional music while singing, dancing and playing instruments to the age-appropriate song. The non-musical condition included the same traditional music, but the pairs did not engage in the same activities of singing, dancing and playing instruments. To keep the kids motivated and interested throughout the activity, there was a background story including a garden pond. The way that the participants engaged with the pond varied based on the condition they were assigned to. The morning song included singing along and using instruments while morning exercise eliminated musical features and language was used to talk back and forth. This was done three times until all of the frogs were identified as awake, mainly to measure the joint activity of the pairs. This was done strategically by using cue words so that the researchers created opportunities for the pairs to work together. To aid the pairs, the cue words were built in through rhyme and repetition. Although, it was crucial for the children to be paying attention to their partner so the joint activity could occur.

Following the initial activity, the pairs were prompted with a problem-solving task to test their readiness to help their partner in which they must work together to prepare food for the fish and frogs in the pond. Each child within the pair was required to carry six of the 24 marbles in a tube, the marbles were considered the “fish food”. The children received a demonstration, but one person in the pair was intentionally given a faulty tube. At that point, it was observed if the child who did not receive the faulty tube would provide assistance to his or her partner or if they would continue with their personal goal of feeding the frogs.

Finally, researchers examined the cooperative problem solving amongst the participants. The pairs could do this individually or together. The goal of the pairs was to feed the fish in the small aquariums which included dropping the marbles into their appropriate colored device, and then pulling a string from the other end so that the marbles would fall into the aquarium. Various ways to solve the task were demonstrated to the pair prior to allowing them to do it themselves.

The researchers found that both boys and girls were more helpful after joint music making [$\chi^2(1)=6.04; p=.01$]. Although, girls were more helpful than boys during the entirety of the study, this was measured through a test of interaction which looked at communication strategies. It was also found that in 70 percent of the trials, if the child decided not to help, they verbalized the excuse and showed more empathy or greater social commitment. When presented with the cooperation test, the results were constant. Both boys and girls chose the more cooperative way to work through the game together. Many prosocial phrases were stated throughout the activity as well. The occurrence of this communication was higher in the musical condition (mean=63.8, S.D.=5.11) than the non-musical condition (mean=3.38, S.D.=5.27). Overall, the findings showed that joint music making improves prosocial behavior in 4-year-olds.

The results of both studies support future research of music's effect on students with emotional behavior disorder by showing music's connection with prosocial behaviors. Although, if music can have this prosocial effect, will all types of music have the same effect?

Types of Music and Emotions

It is essential to discover the various effects different types of music may have on people to identify the most appropriate tune to present to participants in future studies. Tropeano and McCraty et. al's research inspects just that.

The study conducted by Tropeano (2006) examined the question: Does Rap or Rock Music Provoke Violent Behavior? Researching past studies, Tropeano discovered the significant relationship between listening to violent music and aggressive behaviors. From that, she created her hypothesis: "there will be a positive relationship between the music one listens to (violent and aggressive music) and how aggressive one behaves" (p.32). The independent variable was the violent music the participants listened to. The dependent variable was the behaviors the participants exhibited after listening to the music.

The participants of the study included 33 undergraduate university students, all 18 years or older. The students received partial course credit for their involvement with the study. No other information is provided on the participants.

The participants were divided into 3 equal groups. Two of the groups listened and watched rap artists' music videos, and then completed a 12-item questionnaire. The first group watched a rap artist, DMX, this was considered the violent video. The second group watched a rap artist, Will Smith, this was considered the non-violent video. The DMX video included fighting, car theft, profanity, and yelling. The Will Smith video displayed people dancing and

enjoying themselves. Participants in the control group did not view a music video, but were required to fill out the questionnaire's first page that held scenario questions. The entire questionnaire included questions with scenarios and scales regarding the subject's feelings after listening to the music. The scale was 1-4 (1 = low aggression and 4 = high aggression). Therefore, scores falling above 12 indicated high aggression, and scores below 6 showed low aggression of the subject.

The results supported existing research that listening to violent music does have an effect on aggression. One-way ANOVA and post hoc Turkey test results show a significance between the violent and non-violent group. The subjects who listened to and watched the violent music video answered the scenario questions with the most violent answers. For instance, they also exhibited obvious change in moods and their behaviors changed. Whereas the participants who watched a nonviolent rap video answered questions with nonviolent responses. Tropeano argued that these significant results can be attributed to the extreme difference in the videos.

Although rap music is preferred to African American males in elementary school, it is essential to discover further genres and whether it promotes positive or negative outcomes.

Research conducted by McCraty, Barrios-Choplin, Atkinson and Tomasino (1998) investigated how different types of music affect someone and how designer music effects mood, tension and mental clarity (p.76). The investigator's had 4 hypotheses. The first states that all four types of music will affect feelings. The second was that grunge rock music will increase negative feelings. The researchers also hypothesized that designer music will heighten positive feelings, lower tension and negative feelings. The final hypothesis stated, "teenagers will be less positively affected by classical music and less negatively affected by grunge rock music than will adults" (p.76). The independent variables in this research are the type of music presented and the

age of the participants. The dependent variable is how the participants feel after listening to the music (negative or positive feelings).

There were 144 participants, 50 males and 94 females. The subject's ages ranged from 12-76 years with a mean age of 38. The adult population were from church study groups in the United States, and volunteers from Boulder Creek, California. The teenage population were drafted from a summer camp. The location of the subjects from the church study groups ranged from Georgia, Washington, California, Tennessee, Oregon and Maryland. All participants and study coordinators were uninformed of the goal of the study and the hypotheses.

The music was introduced to the participant's one category at a time, with a listening time of 15 minutes. Every group heard different categories of music at different times, these orders were picked at random. A week was placed between each listening session. Listening sessions were specific due to protocols of the study. The participants started off seated, while they were provided a questionnaire that measures the subject's current mood, tension and mental clarity. Study coordinators went through a series of instructions to discuss with the participants, as well as created a space that could be replicated for future listening sessions (room, lighting, temperature, and music volume). Various types of music were selected to be played during sessions such as: grunge rock, New Age, classical, and designer music. A pre-test and post-test were given before and after the music played to accurately identify change in mood, mental clarity, tension and overall feelings.

The results show that the subjects did have a change in feelings after listening to every type of music presented to them. Classical music displayed a decrease in tension. New Age music showed an increase in relaxation while hostility, tension, mental clarity and vigor all declined. Hypothesis 2 was also supported showing that when presented with grunge rock music,

negative emotions increase. Results show that when presented with designer music, significant growth in positive feelings such as caring, relaxation, mental clarity and vigor occur. An ANOVA test was run to identify how adult and teenage results varied. This showed that the adults responded positively to classical and new age music, but negatively to grunge. Teenagers displayed negative feelings to classical, new age and grunge. Grunge affected the populations significantly different because the reduction of caring was greater (p.5) in adults than in teens. The researchers also found that adults and teenager's feelings after listening to designer music were not significantly different. Although, the researchers state that "designer music had the greatest and most favorable effects on the listeners" (p.83). This poses further research on the effects of designer music.

Through introducing different types of music, the researchers were able to identify that music can have an effect on characteristics students must possess to be ready to learn, such as: mental clarity, decreased hostility, and stamina. When researching music's effect on prosocial behaviors in an academic environment, one must also take into account the prosocial behaviors that are crucial in the classroom like time on-task, focus, and academic performance.

Music's Effect on Academic Behaviors

In a study done by Diaz (2011), the inquiry of a mindfulness meditation method's effect on attention, aesthetic response and flow during music listening was pursued. The researcher hypothesized that there would be an effect. The mindfulness meditation method was the independent variable in the study, as the attention, aesthetic responses and flow were the dependent variables.

The participants in the study were all from a music student population at the university level. There were 132 total subjects, including undergraduate and graduate students. No demographic information was identified. Participants were broken up into four groups. The first sample size, mindfulness induction and aesthetic response, included 34 subjects. The second, mindfulness induction and flow response, was a group of 35. The two final groups were aesthetic response (n=32), and flow response (n = 31).

A listening task was provided so the participants could clarify mindfulness, flow and aesthetic response. The sample size specifically directed to measure mindfulness listened to a 15-minute pre-recorded introduction demonstration. All procedures were supported by previous findings, with the exception of flow. To gain reliability with measuring flow, a pilot study was conducted.

When conducting the pilot study the researcher mirrored the population of the main study, rather with a smaller sample size. A questionnaire was provided to the participants that inquired if they were familiar with the definition of flow, and if it had been experienced before. Eighty-eight percent of the participants confirmed that they were familiar with flow, and they had experienced it before. An additional portion of the pilot study determined the appropriateness of the operational definition of flow. Ninety-six percent of the participants confirmed that this definition was suitable for future studies.

With the results gained from the pilot study, the main study increased support in the area of flow. The stimuli in this study were mindfulness, and music. Mindfulness was measured by providing a 15-minute condensed form of a meditation task. Reminders to focus on breathing and physical awareness throughout the duration of the task were provided. The musical stimuli

were opera excerpts from 1974, this was chosen based off support from past studies based on familiarity, quality of performance and greatness of aesthetic experience.

To measure the responses of the participants on mindfulness and the listening conditions, questionnaires were provided. This specifically determined if the sample had experienced flow and/or aesthetic response throughout the study, if the continuous response digital interface dial recorded their different responses, how long the response lasted and the degree of it.

All of this was done in a soundproof room within a musical facility. There were four partitioned stations that provided the CRDI, along with specific instructions provided by a proctor.

The researcher had results in the areas of the four experimental groups: mindfulness and aesthetic response, mindfulness and flow, aesthetic response and flow. To identify mindfulness and listening, many variance tests were engaged, with no significant difference identified. Additional analysis showed that within-subjects factor of mindfulness and aesthetic response, as well as mindfulness and flow. In both areas there was a significant increase in attention at the .01 level between baseline and participant response after music listening. Ninety-seven percent of the participants experienced at least one moment of the conditions of listening through the listening task. With mindfulness induction, 64% stated that they are certain the task affected their listening experience.

In conclusion to the results, mindfulness affects the conditions of listening in different ways. Specifically for flow, mindfulness decreases the impact of the overall response, with opposite results for aesthetic responses. Diaz also reflects on potential uses of this research, “although the primary focus of this study was on music listening, for performers, the possibility

of reducing distractions and unnecessary rumination would seem extremely beneficial” (p.10). This statement speaks directly to future studies of the increase in positive social skills, more specifically listening and ignoring distractions, and its connection to music.

The results and the conclusion of the researcher’s study lend themselves to the effects of music therapy on positive social skills. Further investigations lead to additional information on music’s effect on prosocial skills needed for the classroom.

In a study done by Lesiuk (2005), the effect of music listening on affect, work quality and time on-task of computer information systems developers was investigated. The researcher hypothesized that there would be a positive effect of affect, work quality and time on-task within the developers. The independent variable within this study is the presence of music while the dependent variables are the affect, quality of work and the time on-task.

The 56 participants (male = 41, female = 15) were all computer information system developers from companies within cities in Canada. The age of the participants ranged from 19 to 55 (M = 32.8). Participant’s experience working as a computer systems developer went from 6 months to 20 years. The sample reported a mean of 1.95 years of musical experience. Some participants listened to music daily (M=1.72 hours).

The affect, work quality and time on-task was measured two times weekly, with two days in between. Days were alternated during the five weeks that the study took place. Participants received music logs during weeks 2, 3, and 5 to discuss their mood before and after listening to music, the amount of time spent listening to music and the type of music that was listened to. The initial week of the study, the participants were to go about normal music listening habits and record affect, quality-of-work and time-on-task on Monday and Wednesday afternoon.

Participants were then presented with a selection of 65 CDs of a variety of genres. All developers had the option to choose the music of their best interest. This continued through week 3. At week 4, the music selection was removed from the workplace and given the direction to not listen to music. Each subject confirmed through personal signature that no music was listened to. The music selection was made available during week 5, along with the music log.

To measure the affectivity of the participants, each subject received a 25 true/false questionnaire to identify consistency of affect. The questionnaire included 14 negative and 11 positive affect questions. Quality-of-work was measured through a Likert-scale questionnaire tailored to the systems development life-cycle of: analysis, design, development, implementation and maintenance. Participants were required to self-assess their creativity and effectiveness of their solutions as well as record any mental blocks. Time-on-task was assessed within the quality-of-work questionnaire by asking participants if they completed their systems development life-cycle in less time (scored as 0), the same time (scored as 5), or needed more time (scored as 10) than the allotted time for the task.

The researcher's discovered a high number of positive affectivity within the participants. A statistically significant relationship between age and music was identified through a negative correlation; meaning that the older the subject, the less time the individual spent listening to music. This was supported across companies within the study. Increase in positive affect was most obviously observed in week 5, the week following no music. Although, positive affect was highest in week 3 ($M=27.58$). Results regarding quality-of-work show that throughout the study from baseline to week 3, music's effect was relatively weak. A statistically significant difference was identified when looking at the difference between the baseline and week 4, when the music was not present. By looking at the results through this lens, the researcher was able to unveil that

music listening does have an effect on quality-of-work. Results of participant's time-on-task discovered that subjects required more time to complete their life cycles throughout week 4. Statistical analysis confirms a trend that there are considerable effects of music listening to time-on-task. Subjects spent the least amount of time on their computer life cycles throughout week 5, when the music was re-introduced.

Overall, the findings directly relate to the hypothesis of the researcher. The positive affect within participants will lead to an increase in performance. Lesiuk discussed need for further investigation in the area of music listening reliably bringing out positive feelings. This study connects to future studies of the effects of music on social behaviors in the school environment because the participants will be required to complete an academic task in a 30-minute time-frame. With that, it will be observed if positive affect and focusing on the task at hand is a direct result of listening to music while completing the academic task.

Through various studies, it is clear that music can have a positive effect on behaviors and encourage behaviors needed for the classroom environment. Yet, can these behaviors differ because of age or academic ability, and can that set participants apart because of their current social knowledge?

Differences in Social Behaviors and Emotions

In a study done by Yuksel (2013) research was conducted to determine social behaviors of primary aged children based on their grade-level, learning disability and intelligence potential. Based on previous studies, the researcher's essential question was "to what extent the social behaviors of 7-9-year-old children at school vary depending on the grade, gender and learning disability variables." (p.781). The independent variables within the study are the age/grade,

gender and learning abilities of the students. The dependent variable is the social behaviors exhibited by the participants.

The participants included 166 first, second and third grade students. Sixty-seven of the sample were girls, while 99 were boys. There were 68 first graders, 55 second graders, and 43 third graders. Of the 166 participants, half of the participants had experienced a normal development process, while the other half had a diagnosed learning disability. Within the 83 participants with a learning disability, 36 were girls and 47 were boys. The population that had normal development, 31 were girls while 52 were boys. The sample with normal development was chosen to participate through random sampling. The participants with a learning disability were selected based on feedback from their educator. None of the students who were diagnosed with a learning disability experienced behavioral hardships, hyperactivity or attention deficit.

Yuksel conducted the study based on a relational screening model that identifies how stimuli can change variables. Specifically, the researcher was discovering if there is a relationship between potential intelligence and the student's social capabilities. Data from the 2011-2012 school year was collected from all 166 participants by 6 psychologists and counselors. Participants that were within the learning disability group were assessed based on the Wechsler Intelligence Scale for Children. THE WISC-R assess students on general information, similarities, mathematics, vocabulary, reasoning and number sequencing. Individual's raw scores on the WISC-R were converted to age-appropriate scores based on four-month age periods. The participants' verbal intelligence was determined based on verbal sub-tests. Performance Intelligence was calculated by observing the total standard scores within the sub-tests, while the Total Intelligence is found through the total verbal and performance sub-test scores. Participants' social behaviors were assessed through a School Social Behavior Scale. The scale consisted of

two sub-scales: social abilities and antisocial behaviors. Social abilities included: interpersonal skills, self-management skills, and academic skills. Antisocial behaviors consisted of: hostile-irritable, antisocial-aggressive, and demanding-destructive. Tests were administered individually. Determining results to the essential research questions were done by statistical analysis. For the first research question, “Do children’s level of ‘social competence’ and ‘antisocial behavior’ significantly vary depending on their grade, gender and learning disability”, a one-way variance analysis and independent group t-test was done. A Scheffe test had to be completed as well in order to make various comparisons between gender and learning disability. The researcher’s second and third questions “Does children’s potential intelligence and meaningfully justify their social competence, academic skills, and antisocial behaviors?” and “Does children’s potential intelligence meaningfully justify their social competence, academic skills and antisocial behaviors depending on whether they are diagnosed with learning disability or not?” were analyzed by linear regression analysis.

Results of the first research question with a focus on gender was that girls’ social competency was higher than boys. Yuksel also found that social capabilities did not differ depending on the students’ educational development. The researcher discovered that the level of intelligence of each participant validates seven percent of academic skills, six percent of social behaviors and three percent of antisocial behaviors. The results of the third research question were found to be telling. Students with learning disabilities and predictive nature of antisocial behaviors was not significant. The intelligence levels of students can account for ten percent of social capabilities and six percent of academic skills. Overall, intelligence levels can be a predictor for students’ social behaviors, academic abilities and antisocial behaviors. Yuksel also discovered that antisocial behaviors are more likely to be found in children at the age of 9.

Yuksel's study answers a few crucial inquiries that can be used for future research as well as informative data for educators within the primary education system. By understanding the relationship between social competences, academic abilities and antisocial behaviors across grade levels and developmental abilities it can provide more accurate insight to students and their behaviors. This supports research of males in elementary school to better understand the social competences they are starting with, and how antisocial behaviors are prevalent at their age.

Conclusion

This chapter displayed a review of literature on music's effects on social and academic behaviors, as well as social capabilities. In a study done by Lesiuk (2005), it determines that music promotes positive affect when given a task. While Kirschner and Tomasello (2010) identified that creating music together can encourage cooperation and voluntary problem solving amongst young children.

Through the studies observed, it is seen that music does have an effect on prosocial behaviors among people of various ages, genders, and populations. With the use of music in the classroom, and in other environments, it can act as an unconscious buffer while stimulating optimistic and productive actions. Students, and other populations may use music to become more self-directed and focused on advancement. Future populations may make those advancements by decreasing negative interactions and/or the using music to stimulate positive interactions specifically in the classroom.

Secondly, music showed to have an effect on prosocial academic behaviors. These behaviors included time on-task, attention and listening. Statistical analysis confirms a trend that there are considerable effects of music listening to time-on-task (Lesiuk, 2005). The study

directed by Diaz (2011), also saw that there was a significant increase in attention at the .01 level between baseline and participant response after music listening. By introducing music within classrooms, it may help students focus on the academics around them and decrease being consumed by distractions.

Finally, research also identifies that music has positive effects on behaviors, but it is important to focus on the types of music being presented to populations. Tropeano (2009) discovered the significant relationship between listening to violent music and aggressive behaviors. The content, beat, and rhythm of the music are essential when aiming to increase prosocial behaviors in males with Emotional Behavior Disorder.

In conclusion, research says that when presenting a population with appropriate music that they favor, there may be an increase in constructive behaviors both in a social and academic environment. The review of literature suggests that a specific type of music will promote those prosocial behaviors in structured settings.

CHAPTER THREE: METHODOLOGY

Introduction

To identify if music therapy has an effect on behaviors of three African American boys with emotional behavior disorder, a case study was created. This chapter discusses the procedures created to monitor three students' behaviors during independent work time in the presence of music. Specific behaviors observed were: ability to focus on a task, listening skills, communication and ability to follow directions. The initial section provides details about the student description, setting and sample population. The final section describes the intervention procedures and data collected to determine if the presence of music during independent work had an effect on the behaviors of the participants.

Student Description, Setting, and Sample Population

Student Description

Three young African American male students in Grades 3-5 made up the research population. There was one student from each grade level. All of the students had individual education plans (IEP), and were identified as having behaviors that consistently impeded on their learning and the learning of others. The challenging behaviors varied in extremity, yet each of the students involved in the study had particular behavioral characteristics that were predictable due to the consistency in which the behaviors occurred and the pattern of behaviors. Within the day-to-day lessons students engaged in behavioral and social-emotional lessons as well as their grade-level academic material.

Throughout the year, prior to the intervention, it was clear that all of the students struggled maintaining self-control throughout independent work. Behaviors that were often

addressed were lack of focus on the assignment, negative communication, disregarding directions and directing their attention to behaviors of others. None of these behaviors allowed students to focus on the work at hand.

Through additional observations, it was clear that all students within the classroom enjoyed listening to music during non-academic time. Each of them often made the choice to use their personal time listening to songs they preferred. Throughout the time music was playing, students were focused and were rarely distracted.

Setting

This study took place in an elementary urban public school in Milwaukee, Wisconsin. The students were in a self-contained special education comprehensive behavior unit for 6.5 of the 7 hours of the school day. The comprehensive behavior unit (CBU) is a specialized environment for (3-10) students who exhibit the most challenging behaviors, and who have previously shown they have a difficult time learning in a larger environment. The music intervention occurred during the thirty minute social studies independent work block, three times a week. The observations were made in a group-setting within the comprehensive behavior unit.

Sample Population

This case study concentrated on three African American male students; who were in third, fourth and fifth grade. The three young males were academically diagnosed with emotional-behavior disorder and/or Attention Deficit Disorder-Hyperactivity. Each of the young males had individual education plans (IEP) and received regular-education instruction as well as additional instruction in the areas of behavior and social-emotional awareness. One out of the three students regularly performed on grade-level. The other two students performed, on average,

1.5 years below their grade-level. For the exception of their non-academic time, all participants received instruction and worked independently on academic tasks without the presence of music prior to the study.

Overview of the Procedures

Through observations, knowledge of the participants, and review of past research, procedures were created. Research completed by North, Tarrant and Hargreaves (2004) found that participants were more likely to complete a high-cost task when presented with uplifting music. Their research assisted in deciding the type of music played during the intervention, and was supported through the findings of research done by McCraty, Barrios-Choplin, Atkinson and Tomasino (1998) as well as Tropeano et. al (2006). In addition, Kirschner and Tomasello (2010) found that participants within their study increased positive prosocial behaviors during joint music making. Implementing Kirschner and Tomasello's findings within the procedures were helpful in identifying what prosocial behaviors to look for when observing students.

Participants began by engaging with an eight-question survey (Appendix C) to self-evaluate their current social behaviors. Directly prior to the participants taking the survey, it was discussed and explained as a whole-group. As the survey was read aloud, students' ranked their ability to consistently listen, follow directions, and focus (ignore distractions). Participants also listed three ways they positively communicate with peers, and ways they have negatively communicated with peers. Lastly, students' listed their favorite music, least favorite type of music and ranked how listening to music makes them feel (1-5 scale). Directly after the completion of the survey, participants reflected in a 15-minute discussion on their social behaviors, and where they self-evaluated on the 1-5 scale. Every participant was able to verbalize

their reflections or self-evaluations at least one time. The surveys and discussion were used as baseline data which will be reported in Chapter Four.

As Week 1 began, direct whole-group social studies instruction continued, just as it occurred prior to the beginning of the 8-week intervention. Whole-group instruction included modeling or explaining a topic, a guided practice with students, a final example as a group and then students working independently for thirty minutes. Independent work was consistently five multiple choice-questions and one short answer or application question.

During the participants' independent work time, behaviors were observed using a tally and anecdotal chart (Appendix A and B). Every three to five minutes, a tally was created for the behavioral choices students made in the areas of listening, communication, ability to follow directions and focus. In addition, an anecdotal chart was used to provide more context throughout the observation time. This was specifically decided as a data-collection tool to show connections between students' abilities to use self-control when students around them were showing negative behaviors. This intervention continued for eight weeks.

On Monday of Week 9, the intervention concluded with the post-survey (identical to the pre-survey). A reminder of the contents of the post-survey was explained and was read aloud to participants. After all participants completed the survey, a 15-minute discussion was had about the progression of the behaviors during independent work time and reflections on personal growth. The survey and discussion were used as comparative data to the pre-survey and the data collected.

Intervention Design

The intervention took place over an 8-week period. Each week was broken down into three days of 30-minutes of intervention and observation. This occurred every Monday, Wednesday and Friday for the 8-week period. The participants worked on independent work in the area of social studies while listening to uplifting music. Throughout the observation, students' behaviors were monitored in the area of focus, ability to follow directions, communication and listening skills. Reminders and encouragement was given to students as to what behavior was acceptable and school-appropriate during independent work time. The series of songs on the mixed-tape of music stayed constant throughout the 8-week intervention. A pre-survey, post-survey and the data collection throughout the 8-weeks determined if the music therapy was effective.

Weekly Sessions

Throughout every day of the week, prior to independent work time, students were reminded to follow directions, listen closely to the teacher, communicate positively through raising their hands and asking questions and focus on the work at hand. The independent work that they were responsible for completing on their own, was directly related to the lesson each of the participants engaged in whole-group. A layout of the sessions can be seen below:

- Week 0:
 - 8-Question Pre-Survey and Discussion
- Week 1-8:
 - Monday, Wednesday, Friday: 30-minute independent work while listening to the mixed tape with classical and instrumental music

- Week 9:
 - 8-Question Post-Survey & Discussion

Data Collection

One type of data collection that offered more context as to where participants were at behaviorally was the 2014-2015 suspension data. The purpose of using the suspension data was to identify if behaviors were problematic during times in which students were independently working, or in an unstructured time. By using the suspension data, it also allowed to see if there were trends in specific behaviors. The 2014-2015 suspension data was taken from an online district database. A more thorough description of the suspension data analyzed can be found in Chapter Four.

The second form of data that was collected, was a pre and post survey taken by participants (Appendix C). The purpose of the pre-survey was to provide baseline information on the participant's personal view of their current behaviors. The post-survey gave the researcher more information as to how the participants viewed their personal growth throughout the eight-week intervention. Participants included information such as their favorite and least favorite type of music, as well as ways in which they communicate both positively and negatively. The participants also ranked their abilities to listen, follow directions and ignore distractions on a one to five scale. By comparing the data from the pre-survey and post-survey behavioral growth was identified by participant.

Throughout the eight-week intervention, data was collected in a form of tallies and anecdotal recording (Appendix A and B). Throughout every session of the week, behaviors were observed and recorded every three to five minutes with a tally system. The anecdotal records provided more context to specific tallies. Tallies were made in the areas of ability to focus,

follow directions, listening and communication. This data provided a clear distinction as to how participants progressed throughout the eight-week intervention, and the percentage of time in which participants were showing either positive or negative behavioral tendencies.

Conclusion

This chapter describes the procedures used with the participants to improve behaviors during independent work time in the presence of music. The initial section provides student description, setting and sample population. The second section gives additional details about the overview of procedures and how those were influenced by past case studies. The third section, Intervention Design, explains when parts of the procedures occurred and more specifically explains the timeline of the intervention. Finally, the Data Collection section shows how data was collected, the surveys implemented and suspension data used.

Within the following chapter, Chapter Four: Results, data collected on the participants throughout the intervention and the self-evaluated survey results will be shared. Chapter Five: Conclusion will then discuss the results noted in Chapter Four.

CHAPTER FOUR: RESULTS

Introduction

The purpose of this research and eight-week intervention was to determine if the presence of music during independent work time had an effect on the social behaviors and focus of participants. Of the eight-week intervention, each week had three 30-minute independent work sessions. The participants were engaging in work that asked five multiple choice questions and one application question directly related with the lesson given prior to work time. Throughout the work time, behavioral data was collected in the form of tallies and anecdotal records. The study itself observed the social behaviors in the areas of listening, communication, focus and ability to follow directions. This chapter consists of the descriptions of suspension data, survey data and behavioral data; including tables and a summary of the results.

Overview and Data Collection

Suspension Data

One form of data collected was the participant's suspension/incident referral data. Collection of this data provided insight into trends of referrals and behavior incidentals. The researcher reviewed this data and found that there was a trend in negative social behaviors during independent work time. This data influenced the intervention occurring during that particular time of the school day. This motivated the intervention to happen. The researcher looked specifically at the number of suspensions/incident referrals during independent work time up to three weeks prior to the eight-week intervention. Suspension/incident referrals were also observed and monitored three weeks post-intervention to determine if there would be an increase in positive behaviors during independent time. Table 4.1 presents pre-and-post suspension data for each of the three students involved in the study.

Table 4.1

Suspension Data by Student (Pre & Post)

Participant(s)	Pre-Intervention Incident Referral Data	Post-Intervention Incident Referral Data	*Diff
1	4	2	-2
2	2	1	-1
3	2	0	-2

**Diff = Difference between pre-intervention and post-intervention incident referrals/suspensions.*

Table 4.1 shows the incident referral/suspension data that occurred pre-intervention and post-intervention for the three participants in the case study. Prior to the music therapy intervention, the researcher gathered incident referral/suspension data of the participants to identify a trend in the time of day in which behaviors were exceptionally problematic. Behaviors included hitting other students, consistent lack of focus and/or calling out of turn, walking out of the classroom without permission, throwing classroom items at student or teacher, and outbursts that resulted in evacuating other students from the room. As seen in the table above, each participant had at least one incident referral or suspension during independent work time. More specifically, participant one had four, participant two had two and participant three had two incident referrals or suspensions. Suspensions and incident referral data was also monitored three weeks post-intervention during independent work time. Table 4.1 shows that throughout that three weeks, each participant decreased the number of incident referrals or suspensions that they started with.

Table 4.2

Whole Group Suspension Data

Participants	Pre-Intervention Incident Referral Data	Post-Intervention Incident Referral Data	Diff*
All Participants	8	3	-5

Table 4.2 shows the whole-group data for suspension and incident referrals. Before the intervention, participants had a total of eight incident referrals or suspensions during independent work time. After the intervention, data shows that participants had only three incident referral or suspensions during independent work time. This was due to a decrease in specific behaviors such as calling out, hitting, using negative and inappropriate communication and leaving the classroom without permission. Combined, the participants decreased their incident referral and suspension data by five suspensions or incident referrals from three weeks prior to the intervention to three weeks after the intervention.

Survey Data Results

Scaled data responses

Another form of data collected was data from a survey (Appendix C) that was given to the participants both before the intervention, and after. The survey included eight questions, four of which were scaled questions and the other four anecdotal. The scaled questions were Questions 1, 2, 3 and 8. The scale for Questions 1, 2 and 3 was represented as such: 1-I never do this, 3-I sometimes do this, 5-I always do this. These questions allowed participants to rate their

listening skills, ability to follow directions and ability to ignore distractions. Question 8 inquired how music made the participant's feel. Thus, the scale differed: 1: I feel angry, 3: I feel content, 5: I feel happy.

Table 4.3

Participant Survey Results (Pre & Post)

	Question 1: Effective Listening			Question 2: Following Directions			Question 3: Ignoring Distractions			Question 8: Positive Feelings about Music		
	Pre	Post	Diff*	Pre	Post	Diff*	Pre	Post	Diff*	Pre	Post	Diff*
Student 1	3	4	+1	3	4	+1	1	3	+2	5	5	0
Student 2	3	4	+1	2	4	+2	1	3	+2	4	5	+1
Student 3	4	5	+1	4	4	0	2	4	+2	5	5	0

*Diff = Difference between pre-and post test ratings on student survey scale

As shown in Table 4.3, all participants, in all areas, either stayed the same or increased by one scale point post-intervention. In Question 1, students rated their ability to listen. Student 1, rated his ability to listen as a three prior to the intervention, after the intervention he rated it as a four. This table shows his difference from pre to post intervention was an increase of one rating point. Student 2 shows the same ratings and growth as Student 1. Student 3 rated his ability to listen as a 4 before the intervention, and as a 5 post-intervention. As a group, the overall rating grew by three points.

Question 2 addresses the participant's ability to follow directions. Before the intervention, Student 1 rated his ability to follow directions as a 3, and after the intervention rated himself one ranking point higher at a 4. Student 2 began by ranking himself as a 2, and grew to a 4 making two points growth. Student 3 ranked his ability to follow directions as a 4

both before and after the intervention. Out of the three participants, two of them ranked themselves as more consistently following directions. The third participant, although staying the same, began with a high ranking of 4. Overall, students progressed three ranking points higher in the post-survey for following directions.

Question 3 asks students to rate their ability to ignore distractions. Before the intervention, both Student 1 and 2 ranked their ability to ignore distractions as a 1; meaning they never do this. Student 3 also ranked his ability to ignore distractions low at a 2. After the eight-week intervention, all students ranked themselves higher on the 1-5 scale. Student 1 and 2 ranked their ability to ignore distractions two points higher than the pre-survey, as a 3. Student 3 also ranked higher at a 4. Overall, every student rated themselves two points higher than the pre-survey for a total of a six point growth as a whole group in the area of ignoring distractions.

For the eight question, students rated how music made them feel. Both Student 1 and 3 rated their feelings of music as a 5, meaning music made them feel happy. Student 2 rated music as a 4, with the caveat that not all music makes him happy because there is music he doesn't like. In the post test, all students rated their feelings of music at a 5.

These specific questions in the survey allowed for students to self-identify their current behaviors and abilities. In every question, students rated themselves as making growth or staying the same after the intervention. More specifically, students made the largest amount of growth in their ability to ignore distractions. The scaled questions on the survey are supported by additional anecdotal questions.

Anecdotal data responses

The scaled data is supported by additional anecdotal data that participants provided within the survey. All participants were asked open-ended questions for Questions 4, 5, 6 and 7 on the survey. Table 4.4 and Table 4.5 summarizes participant responses of the pre-survey and post-survey, showing the student’s anecdotal responses to Questions 4 through 7. In these questions, students listed their current positive and negative communication habits as well as their preferences in music.

Table 4.4

Participant Anecdotal Survey Results (Pre-Survey)

	Question 4	Question 5	Question 6	Question 7
	<i>List 3 ways you positively communicate with peers.</i>	<i>List 3 ways you negatively communicate with peers.</i>	<i>What is your favorite type of music?</i>	<i>What is your least favorite type of music?</i>
Student 1	High fives, compliments, participation in morning meeting	Profanity, hitting and telling on my peers	Rap	Country
Student 2	Smile, high fives, play with them	I cuss at people, throw things at my classmates, make fun	Disney or Pop	Old songs
Student 3	Encourage them, share, compliments	Cussing, making fun or laughing at people, excluding people	Rap	Music that is girly

Table 4.5

Participant Anecdotal Survey Results (Post-Survey)

	<i>List 3 ways you positively communicate with peers.</i>	<i>List 3 ways you negatively communicate with peers.</i>	<i>What is your favorite type of music?</i>	<i>What is your least favorite type of music?</i>
Student 1	High fives, compliments, participation in morning meeting	Hitting, making fun of people, cussing	Rap or Instrumental	None
Student 2	High fives, help small kids on the bus, compliment people	I cuss at people, throw things at my classmates, make fun	Disney or Pop	Old songs
Student 3	Encourage them, ask people things instead of yell, compliments	Cussing, making fun or laughing at people, excluding people	Rap	Music that is girly

Over the eight-week intervention, as seen by comparing student responses in Tables 4.4 and 4.5, some methods of communication changed for Students 2 and 3. In the pre-survey, Student 1 noted that his positive communication included smiling, high fives and play while in the post-survey he listed high fives, helping younger students and compliments. As for Student 3, he stated encouragement, sharing and compliments in the pre-survey and encouragement, asking questions instead of getting frustrated and compliments as his post-survey responses. Student 1's answers generally stayed consistent for his communication in the pre and post survey. Students' preferences for music only changed for Student 1, who recognized that he likes mostly all music and was surprised that he enjoyed songs on the mixed tape. In addition to the student survey, behavioral data was collected throughout the duration of each session throughout the eight weeks to determine if music therapy had an effect on behaviors of the participants.

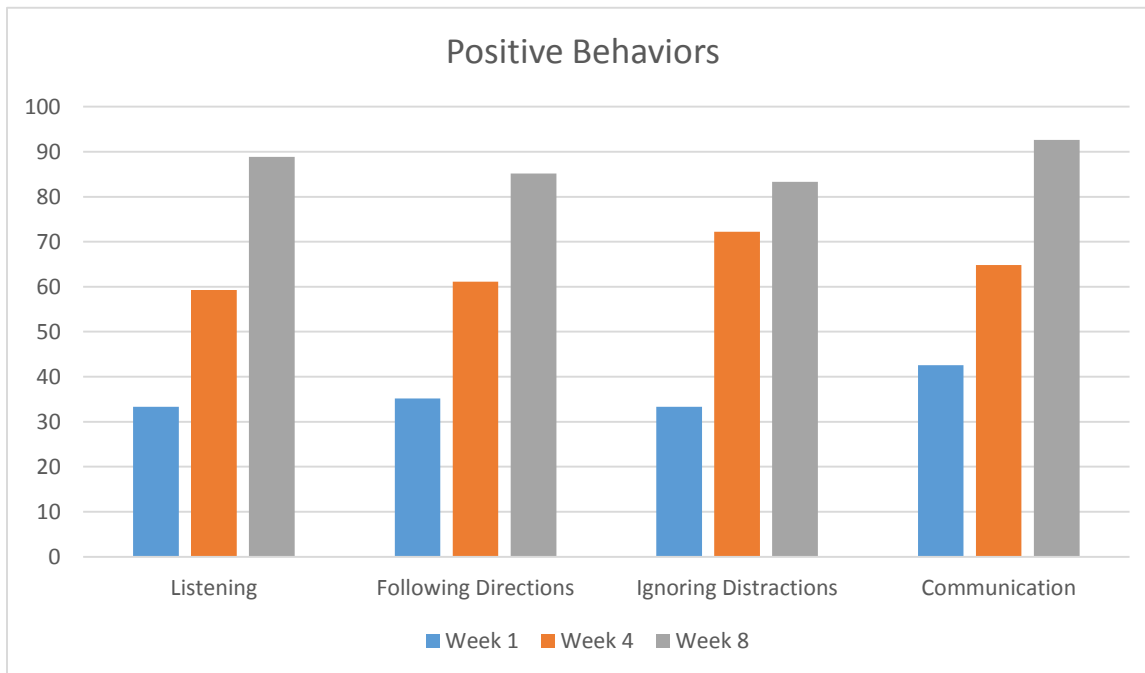
Behavioral Data

Behavioral data was collected during the student's independent work time in the areas of listening, ability to follow directions, ability to ignore distractions and communication.

Behaviors were tallied every three to five minutes throughout the 30-minute sessions, three times weekly. The researcher collected data through tallies and anecdotal responses to give context to any particular behaviors that the tallies did not show. Averages in the areas of listening, ability to follow directions, ability to ignore distractions and communication for both positive and negative behaviors are found in Graphs 4.1 and 4.2 for Weeks 1, 4, and 8.

Graph 4.1

Positive Behavior Averages of Students (Weeks 1, 4 and 8)



In Graph 4.1, averages of the positive behaviors exhibited throughout the eight-weeks are shown by Week 1, 4 and 8. Week 1 shows that on average students were behaving positively in all areas about 36% of the time during the 30-minute sessions that week.

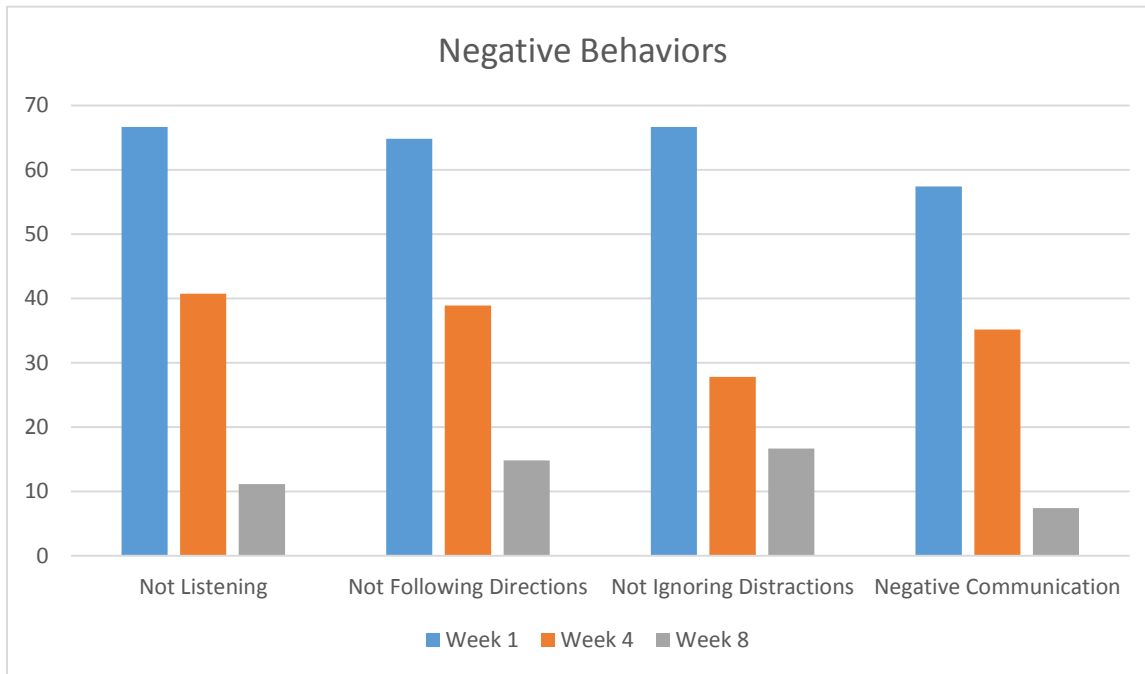
Week 4, shows an increase in positive behaviors in all areas. Students went from listening about 33% of the time, to about 59% of the time, exhibiting a 26% increase. Following directions had a similar increase starting at students following directions 35% of the time and increasing about 26% the end of Week 4. Student's increased their ability to ignore distractions from Week 1 to four by 39%, ending Week 4 at ignoring distractions 72% of the 30-minute time frame. Students began communicating positively 42% of the time in Week 1, and increased their positive communication by 22% to end Week 4 communicating positively about 65% of the allotted time.

Going into the following four weeks, there was a continued increase in all areas of positive behavior. Students went from listening 59% to about 89%, following directions from about 61% to 85%, ignoring distractions from about 72% to 83% and using positive communication from about 65% to 93%. The largest increase was in the area of listening with a 30% increase from Weeks 4 to 8.

Overall, the increases in positive behavior from Week 1 to Week 8 were about 50% to 55% in all observed areas. The increases in positive behavior are complemented by the decreases in negative behavior as seen in Graph 4.2.

Graph 4.2

Negative Behavior Averages of Students (Weeks 1, 4, 8)



Throughout the intervention, the intention of the music therapy was to increase positive behavior. With that, came a decrease in negative behaviors. As seen in Graph 4.2, students began the intervention exhibiting negative behaviors over 60% of the time by not listening, following directions or ignoring distractions. Negative communication was slightly lower than 60% in week one. The table shows that from Week 1 to Week 4, dramatic decreases occur in all areas, with ignoring distractions as the largest decrease of 39%. From Week 4 to Week 8, students continued to decrease their negative behaviors in all four areas. The largest decrease seen in the second half of the intervention was in the non-listening behavior with a decrease of 30%, ending the intervention with students engaging in that behavior about 11% of the time. Negative communication followed that major decrease with a 27% decrease. Negative communication was the area in which students ended the intervention by engaging in that behavior the least, at 7%.

Overall, the behavioral data was essential to at the core of identifying if the music therapy was successful. This data indicates that music therapy did have an effect on the increase of positive behaviors and the decrease of negative behaviors for students with emotional behavior disorder during independent work time.

Conclusion

This chapter displayed the data collection during the eight-week research study. The intention of the data was to determine if music therapy had an effect on behavior of students with emotional behavior disorder during independent work time. In order to prove this hypothesis, suspension/incident referral data, pre and post-surveys, as well as tally and anecdotal behavior collection were discussed and analyzed. Prior to the intervention, the students were regularly showing negative behaviors as supported by the suspension and incident referral data and behavioral data from week one in the intervention. In the suspension and incident referral data, all students decreased their referrals/suspensions post-intervention. Students self-identified their progress with the use of the pre and post-survey. Where every student identified growth in at least two areas of behavior. In addition, the behavioral data showed dramatic increases in positive behavior and decreases in negative behavior throughout the eight-week period in all observed behaviors. On average, every student was engaging in positive behaviors over 80% of the 30-minute intervention time. Over all the various data collections, each student made positive progress in their own individual way. This chapter discussed the data collection to show the behavioral development, yet Chapter Five will delve into the conclusions drawn from the data and make recommendations for the participants and future research.

CHAPTER FIVE: CONCLUSION

Introduction

The purpose of this research and intervention was to determine if the use of music therapy had a positive effect on behaviors of students with emotional behavior disorders. Throughout the eight-week intervention, students listened to mixed-tape of instrumental songs during independent work time. The researcher monitored the student's behaviors during that 30-minute independent work time in the areas of listening, following directions, ignoring distractions and communication. According to the suspension/incident referral and behavioral data collected, the student's positive behaviors increased, and their negative behaviors decreased. This was supplemented by the post-surveys students completed to self-identify their growth over the eight weeks. In this chapter, connections to existing research, explanation of the results and the strengths and limitations of the study will be discussed. Recommendations for future research in the area of music therapy and its effect on behaviors will also be presented.

Connections to Existing Research

Past research has shown that music may have an effect on increasing positive or prosocial behaviors in people of various ages. Additional research investigated the effect of different types of music on people's behaviors and moods. This existing research, discussed in Chapter Two, focused on specific questions to identify the variety of effects music has on people, behaviors, emotions, etc. Targeted questions to advance the action research were: What effect does music have on social behaviors? Do certain types of music elicit a particular response, or encourage behaviors or emotions? What effect does music have on academic behaviors? How do emotions and behaviors change based on age? A variety of different case studies responded to these questions. The past research shaped the design and implementation of the action research study.

Studies done by Kirschner and Tomasello (2010), as well as Hallam and Price (1998) were used to answer the researcher's question: does music effect social behaviors? Kirschner and Tomasello (2010), investigated connections between joint music-making and altruistic behaviors in students. The researchers predicted that engaging in joint music-making should have children behaving in a prosocial manner. Students interacted together in both musical and non-musical conditions and had to complete an activity. The researchers found that when students engaged in the musical condition, use of communication in students was higher. Similarly, the students within my study also increased their positive communication while music was present. By the final week of the intervention, positive communication was used about 93% of the time. This was a drastic change from the 43% of positive communication in the first week of intervention. Socially, the music had an effect on the way students communicated.

Another research study, conducted by Hallam and Price (1998) discovered that introducing background music to students with emotional behavior disorder increased their positive behavior and academic performance in math. The researchers included that despite some non-significant findings, "the effects of music were consistently positive" (p.90). Findings from these studies showed that with the presence of music, positive emotions and behaviors resulted, as well as an increase in use of communication. I also found that the effects of music were consistently positive. Although I did not specifically look at the effect of music on the students' academic performance, I did discover that music affected students on a social level in the areas of listening, following directions, ignoring distractions and communication. Each student increased their ability to engage in these social behaviors positively throughout the eight-week intervention.

Another question the researcher inquired was if the type of music would elicit particular behaviors from the participants. This question was more thoroughly investigated in a study done by Tropeano et. al (2006); where the hypothesis was that there would be a positive relationship between the music one listens to their behaviors. More specifically, the researchers focused on was violent and aggressive behaviors after listening to rap or rock music. When the participants engaged a viewing of a violent or non-violent music video, the researchers measured their feelings with scenario questions. The subjects who listened to and watched the violent music video answered the scenario questions with the most violent answers. They also exhibited obvious change in moods and their behaviors changed. Whereas the participants who watched a nonviolent rap video answered question with nonviolent responses. Tropeano's study informed the music used for my study, and persuaded me to pick more neutral and calming music to elicit positive behaviors and stray from potential negative behavioral responses to music. The music within my study was specifically instrumental music to avoid lyrical messages within songs. This choice was also informed by a case study done by McCraty, Barrios-Choplin, Atkinson and Tomasino.

Research conducted by McCraty, Barrios-Choplin, Atkinson and Tomasino (1998) also investigated how different types of music affect someone and how designer music had on effect mood, tension and mental clarity (pg. 76). Within the study the participants engaged in various listening sessions, while completing a pre and post-survey to accurately identify change in mood, mental clarity, tension and overall feelings. The results show that the subjects did have a change in feelings after listening to every type of music presented to them. Classical music displayed a decrease in tension. New Age music showed an increase in relaxation while hostility, tension, mental clarity and vigor all declined. One of the hypothesis was also supported showing that when presented with grunge rock music, negative emotions increased. Results showed that when

presented with designer music, significant growth in positive feelings such as caring, relaxation, mental clarity and vigor occur. Both case studies showed that specific types of music may have elicited particular behaviors and/or emotions in participants. The findings of these two research studies assisted in determining what music would or would not be used within this current research study, and what was most appropriate for young students as the participants.

Past research was also investigated to get a better understanding of the effect music has on academic behaviors. A study done by Lesiuk (2005) hypothesized that music listening would increase affect, work quality and time on-task in the participants. For a few weeks of the study, participants listened to music and independently recorded their affect, work quality and time-on-task. While in other weeks throughout the study, music was not present. The participants engaged in various questionnaires to record their affect, work quality and time on-task. It was found that positive affect was identified when music was re-introduced to participants, music does have an effect on quality-of-work, and there are considerable effects of music listening to time on-task. Yet, Lesiuk suggested that further research be completed in the area of music bringing out positive feelings for participants during work time. This study, and the need for further research, supports determining if music may have an effect on student's academic behaviors during work time, which was the purpose of this current research study.

The final question inquired if the different ages of participants would have an effect on the behaviors they exhibited. Research conducted by Yuksel (2013) investigated social behaviors of primary aged children based on their grade-level, learning disability and intelligence potential. Based on previous studies, the researcher's essential question was "to what extent the social behaviors of 7-9-year-old children at school vary depending on the grade, gender and learning disability variables." (pg. 781). Yuksel conducted the study based on a relational screening

model that identifies how stimuli can change variables. Specifically, the researcher was discovering if there is a relationship between potential intelligence and the student's social capabilities. Yuksel collected data from the school year, from tests, sub-tests and a school social behavior scale. It was found that social capabilities did not differ depending on the students' educational development. The researcher discovered that the level of intelligence of each participant validates seven percent of academic skills, six percent of social behaviors and three percent of antisocial behaviors. Yuksel also discovered that antisocial behaviors are more likely to be found in children at the age of 9. Yuksel's study answers a few crucial inquiries that can be used for future research as well as informative data for educators within the primary education system. By understanding the relationship between social competences, academic abilities and antisocial behaviors across grade levels and developmental abilities it provided more accurate insight to students and their behaviors. Yuksel's study informed my inclusion of students in different grade-levels. At the beginning stages of my action research, I questioned if the student's academic ability levels and age difference would play a role in the social behaviors I would observe. After reading more about Yuksel's study I found that including students in different grade-levels shouldn't have a large impact on my findings or their social competences.

Each of the studies mentioned took part in developing and implementing the action research study. In addition, a few of the researchers suggested that further research be conducted – specifically in the effects of music. By using the past studies as a guide, the action research was created.

Explanation of the Results

An intervention was designed to determine if music therapy has a positive effect on behaviors of students with emotional behavior disorder during independent work time. In order

to determine if the music had a positive effect multiple forms of data were analyzed. The first was suspension/incident referral data from the three weeks pre-intervention, and three weeks post intervention to determine behavioral growth during the independent work time. Another form of data collected was the pre and post-survey (Appendix C) given to students to self-identify their personal growth in specific behavioral areas and musical preferences. Comparing the pre-survey to the post-survey provided insight into the student's reflections of their personal behavioral tendencies. In addition, throughout the intervention, behavioral data was collected during the independent work time. The behavior data was collected every five minutes in the 30-minute independent work time for three days each week while students completed an academic task. All of these forms of data provided insight to the growth of the students during the eight-week intervention.

Suspension Data

The first type of data analyzed was the student's suspension/incident referral data. This was collected from three weeks before and three weeks after the eight-week intervention. Using this data initially informed the time during the school day in which the intervention should take place. Post-intervention, I believe this was the best time to do the intervention and allowed for the most time to see students working independently. By gaining that independent work time, as the researcher, I was able to take a step back from doing direct instruction with the students and took on the role as observer. Observing allowed me to collect as much information as possible on how the students were socially interacting.

Additionally, this data showed if students made a behavioral improvement over time. Prior to the intervention, each student had at least two or more suspension or incident referrals during independent work time. Three weeks post-intervention showed that two out of the three

participants decreased their suspension/incident referrals by two, while the other participant decreased their referrals by one. That confirms that 100 percent of participants decreased their suspension/incident referrals during independent work time. As a whole group, students began the intervention with a total of eight suspension/incident referrals, and decreased that to three. The suspension/incident referral data was supplemented by the pre-and post-survey data taken by students as well as the behavioral data collected throughout the eight-week intervention.

After analyzing the results, I believe that suspension/incident referrals decreased because of the culture the music brought to the classroom. Students enjoyed listening to music, and as the observer I saw a sense of calm while they worked on their independent work. This may be due to the instrumental music students were listening to as well. The students made individual comments that they recognized the songs played. Before the observation, the time of day was difficult for them. By adding music to that time gave the students something they could look forward to.

Pre and Post Survey Data

Another informative set of data were the pre and post-surveys (Appendix C) students took before and after the eight-week intervention. The survey asked students to self-identify their current abilities in the area of listening, following directions, ignoring distractions and communication. Students also put their musical preferences, and rated their feelings about music. For listening, students showed an increase with an average of 3.33 in the pre-survey to 4.33 in the post-survey. Following directions increased as well with a pre-survey average of 3, while the post-survey was 4. Ignoring distractions average from the pre to the post-survey increased by 2, with the post-survey data showing students rating at an average of 3.33. Student's reflections on how music makes them feel were all generally high with an average of 4.6 in the pre-survey and

5 in the post-survey. Each average from the pre to post-survey increased. Averages around three show that students identify themselves engaging in that behavior “some of the time”, while averages at about four show students engaging in that “most of the time”.

As the researcher, it was helpful for students to engage in self-reflection and thought in regard to their behaviors. The discussion before and after the survey helped students understand what questions they were being asked and allowed them to engage in the survey in a more personal way. We went over the questions and how to answer the question, corrected any misconceptions, and allowed the students to ask questions they had about the survey. They understood that the survey was a tool to identify their growth from the start of the intervention to the end.

Once students took the survey, they made connections to different examples of their behavior, and spoke in a goal-oriented way prior to starting the intervention. They were honest and forthcoming about the various behaviors they regularly engaged in. After the intervention, they used words like “used to” or “when I did that” as they took more time to self-reflect about what their behaviors were like before. The discussion and the students’ self-identified growth from the pre and post-surveys are indicators that music may have had an effect on positive behaviors.

While the self-reflection is necessary and important to student growth and ownership, the pre and post-surveys did not hold as much weight when determining the actual growth from the beginning of the intervention until the end. Behavioral data taken each session painted a clearer picture of the effect of music therapy on positive behaviors.

Behavioral Data

Behavioral data taken by the researcher during the eight-week intervention was the most telling of the effect of music therapy on the students. Behavioral data was taken by the researcher during the 30-minute sessions throughout the eight-week intervention to determine if the music therapy had an effect on the positive behaviors of students. Listening, following directions ignoring distractions and communication were the main areas of behavior the researcher observed. Comparing week one, four and eight provided a story of the progression how behaviors changed.

In the first week that music therapy was introduced, students were behaving positively in all areas about 36% of the time, whereas about 60% of the 30-minute sessions students were exhibiting negative behaviors. Within the first week, students were unsure of the introduction of music, despite the discussion prior to the intervention and pre-survey. The introduction of music was a change in a regular routine for them and thus students reacted to it. Positive communication was the behavior students were engaging in the most, at about 43% of the time. Listening, following directions and ignoring distractions were about 10% lower than that to begin in the intervention. This is to say that negative behaviors were just the opposite, as students displayed negative behaviors by not listening, following directions, or ignoring distractions. As students engaged in this negative behavior more frequently than positive behavior, they were reminded to focus on their independent work and listen to the music.

As time went on, students became to react to the music in a different way, as week four shows an increase in positive behaviors in all areas. Students began to comment on how the music helped them focus on their work, rather than each other. The music was the center of conversation for the students and they asked “why the music wasn’t played before?”. At this

point the students considered the music helpful to them, and saw the benefits in it. This was supported by the progress shown, as all positive behaviors increased by week four. Ignoring distractions increased the most with a 38.89% increase from week one to week four. Listening, following directions and ignoring distractions made at least a 22-25% increase from week one as well. Students discussed that they were “listening to the music rather than each other” and this made engaging in positive behaviors easier for them.

Students continued to be observed for the next four weeks, and the researcher as well as the students saw the change in behaviors. Independent work time started to be a part of the day that both the students and researcher looked forward to due to the engagement, focus and positivity in the room. The space was quiet, work-friendly and students encouraged one another. Students celebrated this time, and were proud of the progress they made. This was supported by the behaviors that were observed and recorded by the final week of the intervention. By week eight, students were continuously progressing. All behaviors observed in the 30-minute work time were mostly positive. Communication continued to be the positive behavior students were engaging with the most, as they did this about 93% of the time. Students’ ability to listen increased to about 89%. Following directions and ignoring distractions were also both above 80%. As the researcher, it appeared students gained a sense of self-efficacy and confidence in their behaviors once they noticed that they were capable on focusing their energy towards positive behaviors. Other teachers and students were recognizing them for the positive behavior they exhibited during that time. Students began to discuss the feeling of achievement and productivity in their own terms. They were excited about how their focus made them feel.

As the researcher, it was interesting to how the focus shifted throughout the intervention. Students began to see a lot of positive external recognition from other teachers and peers, which

was gratifying. This is important to note especially because the students in the study were accustomed to only receiving negative attention due to their trend in negative behaviors pre-intervention. Initially in the research, students were focused on the effect music was playing in their positive behaviors but as time went on the students spoke less about the music and more about how the recognition of their positive behaviors made them feel.

Conclusion: Explanation of the Results

The intervention was designed to determine if music therapy had an effect on positive behaviors during independent work time for students with emotional behavior disorder. Three data points were collected to determine if the case study was effective. The first was suspension/incident referral data to act as a comparative measure from pre-intervention to post-intervention. A pre and post-survey were given to students for them to self-identify where they believed their behaviors to be, and questioned their preferences in music. Behavioral data was also collected throughout the 30-minute independent work sessions in the areas of listening, following directions, ignoring distractions and communication to determine if students were engaging in more positive behaviors while the music was playing. All of the data points analyzed showed an improvement and growth throughout the study. This indicates that the presence of music during independent work time may have a positive effect on the behaviors of students.

A few key findings from this study indicate that engaging in discussion before and after the pre and post-survey allowed students to verbalize and question how to accurately define their behaviors. Students were also able to give context to the information they provided on the surveys so that accurate growth could be identified from the beginning of the intervention to the end. Using the same mixed tape throughout the whole eight weeks was important as well. At the beginning, students were regularly asking if they could pick a song to play. By having a mixed

tape set of instrumental songs that were familiar to them allowed them to feel ownership over the music played without derailing the intention of the intervention. The use of the mixed tape ultimately provided a sense of consistency rather than simply playing music of the student's choice and it ultimately being a distraction or cause of negative behaviors. The use of praise throughout the intervention helped as well. Students initially focused on the music and how it helped their focus. As time went on, the music did not appear to be the center of their focus, rather "background noise" that the students were subconsciously aware of. In the later part of the intervention, students verbalized the praise they received for their positive behaviors and it appeared that self-efficacy and confidence in their positive behaviors began to form. Finally, by looking at the behavioral data, the time of eight-weeks allowed for students to continue to grow and develop their abilities to listen, follow directions, ignore distractions and use positive communication. By looking at the mid-point of the intervention, all students made gains but did not reach their full potential. The intervention lasting eight-weeks gave students the opportunity to continue to develop those abilities and focus on the use of positive behaviors.

Strengths of the Study

The overall growth of the students' behaviors can be attributed to the various strengths within the study. Use of past research by Hallam and Price (1998) helped develop the idea of introducing music to students with emotional behavior disorder to increase their positive behaviors. By including the use of music therapy within the independent time for students, the researcher as well as the participants were able to see behavioral progress. Just as Hallam and Price found, the effects of music were consistently positive in this study as well.

Furthermore, the type of music used within the study can be attributed to research done by both McCraty, Barrios-Choplin, Atkinson and Tomasino (1998) and Tropeano et. Al (2006).

McCraty, Barrios-Choplin, Atkinson and Tomasino influenced the mixed tape to include classical music, as their findings were that subjects did have a change in feelings after listening to every type of music presented to them. More specifically, classical music displayed a decrease in tension. Thus, by including classical music students found themselves relaxing and increasing their focus during independent work time rather than engaging in negativity and tension.

Tropeano et. al (2006) also attributed to the strength of the study, as the researchers found that there is a positive relationship between the music one listens to and their behaviors. These findings also influenced the creation of the mixed tape, as originally, the mixed tape was going to include lyrics. After reading more about the research done by Tropeano et. al (2006) the mixed tape only included instrumentals of songs, versus a subliminal message (whether positive or negative) that can be provided by lyrics.

Finally, another strength of the study was solidifying what behaviors to officially observe during the eight-week intervention. When designing the study, the researcher was initially going to look at listening, following directions and ignoring distractions. After reading about the research done by Kirschner and Tomasello (2010), it was found that as their young population interacted in joint-music making versus those who did not, had an increase in communication skills. By implementing the observation of communication, the researcher was able to identify that music did play a role in increased positive communication, as students went from communicating positively about 43% of the time in week one to 93% of the time in week eight.

Finally, by including data from three weeks prior to the study and three weeks after the study with the use of suspension/incident referral data, the researcher was also able to get a clearer picture of the specific behaviors to address and target during the intervention. This made the comparison from before the intervention to after the intervention simplified.

Limitations of the Study

This study included location limitations, as the intervention took place in a small public special education classroom in the Midwest. Although the results are positive, they should not be generalized to all populations, or ability levels.

There were three participants in this study, which was limiting as well. By increasing the sample size, including females and having various ages within the group, one could get a better representative of the population.

Further Recommendations

The findings in this study are relevant and current, yet the study revealed more ideas and further ways to investigate the effects of music. With the sample size of three people, it is recommended that future studies include more elementary school students at various behavioral abilities. In addition, future studies can look into two independent work times throughout the day; one with the presence of music and one without. This would provide more insight into the support music provides students throughout the entirety of the eight-weeks, and what positive and negative behaviors look like without music.

Recording of specific behaviors prior to the intervention could also be included in future studies. In this study, the use of suspension/incident referral data was helpful and informative. It provided a platform for what behaviors to look for, and a timeframe in which to hold the sessions. Although, if the researcher observed specific behaviors and tendencies of the students to find more precise problem behaviors prior to the study, it could be more individualized by participant. By using that method, this could also include more student reflection. Including the

participants and engaging in more discussion throughout the intervention would allow the researcher to identify what the students felt was helping them increase their positive behaviors.

Researchers should also focus on specific ways in which music has been used within the classroom, and how it has been effective for students in elementary school. By looking at studies that have been done with music over time, or within the school-setting will provide more accurate context to the potential ways music can affect people and more specifically – students.

For students who were involved in this study, it will be important that music continues to be a part of their work time in some capacity. As the results show, students responded positively to the presence of music. Within the classroom, during flexible or independent time, it could be beneficial to continue to challenge the participants with monitoring their social skills and self-identifying what supports they need to engage in more positive behaviors.

For classroom teachers, I suggest that music live somewhere within your school day. When introducing music to the students, set parameters for when the music will be played, who will choose the music that is played, and for how long the music will play for. I saw that the initial introduction of music resulted in a lot of excited behaviors that had students off-track and disengaged from the activity at hand. Although with continued consistency, students began to expect the music but not derail from the activity at hand with the presence of it. Utilizing music in the classroom also built a positive culture within the classroom that allowed the students and I to connect on a more personal level. Music within the classroom promoted positive behaviors, focus, and happiness for students.

Conclusion

This chapter summarized the action research study, *The Effect of Music Therapy on Social Behaviors of African American Males with Emotional Behavior Disability in Elementary School*. The purpose of the study was to determine if the use of music therapy during independent work time would increase positive social behaviors. The sample population for this study was three elementary school-aged African American boys. All of the participants were in a self-contained special education class due to their emotional behavior disability.

During the eight-week intervention, the participants engaged in independent work time for three days a week, for 30-minutes each. In that time, the students were engaged in an activity that included multiple choice and an open-response application question. Throughout this time, the researcher observed the students' social behaviors in the areas of listening, following directions, ignoring distractions and communication. The researcher recorded both positive and negative behaviors to throughout the 30-minute sessions and wrote anecdotal notes to collect a clear picture of the participants' behavioral progress. At the end of the eight-weeks, the participants made consistent and noticeable progress in all social behaviors observed.

Overall, this study has influenced my personal philosophy on teaching and student behavior in the classroom. I always believed that a loud classroom is a happy classroom, and now I am even more convinced that the noise in the classroom should not only be from student-voice. Music played an important role in student engagement, behavior and happiness throughout the eight-week intervention. As I move forward in my teaching career, music will always play a role in my classroom. "My whole mood or sense can change by virtue of music that I am listening to. It really does affect me on a visceral and emotional level." – Kiefer Sutherland

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Appendix A: Anecdotal Chart

Participant	Time(s)	Anecdotal Notes
1		
2		
3		
4		
5		

Appendix B: Behavioral Tally Chart

	Positive Social Behaviors				Negative Social behaviors			
	Listening	Following Directions	Ignoring Distractions	Positive Communication	Not listening	Disregarding directions	Focusing on distractions	Negative communication
1								
2								
3								
4								
5								
6								

Week # _____ Session # _____ Date: _____

Music listened to:

Activity engaged in:

Appendix C: Questionnaire (Pre-and-Post Survey)

KEY:

1: I never do this 3: I sometimes do this 5: I always do this

1. Rate your listening skills from 1-5

1 2 3 4 5

2. Rate your ability to follow directions from 1-5

1 2 3 4 5

3. Rate your ability to ignore distractions from 1-5

1 2 3 4 5

4. List 3 ways you positively communicate with peers

- a.
- b.
- c.

5. List 3 ways you negatively communicate with peers

- a.
- b.
- c.

6. What is your favorite type of music?

7. What is your least favorite type of music?

8. How does listening to music make you feel?

KEY:

1: I feel angry, 3: I feel content, 5: I feel happy

1 2 3 4 5