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Music Therapy: Effects on Children's Academic Work and On Task Performance

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Music Therapy: Effects on Children's Academic Work and On
Task Performance

by

Maria L. Chavez

May 12, 2006

A thesis submitted to the Department of Education and Human Development of the State University of New York-College at Brockport in partial fulfillment of the requirements for the degree of Master's of Science in Education.

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Dedication

This thesis is dedicated to:

GOD for my life

My family for their wisdom, endless love and support

Acknowledgements

This researcher owes a great deal of gratitude to Carol Zogby and the ladies of my internship placement who were always supportive, kind and caring. Thank you to the Brockport Migrant Education Project for always treating me as part of the family by making my problems their own.

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Abstract

This study observed the academic engaged time of seven students in a self contained classroom. The service that this study concentrated on was music therapy. The study attempted to answer the following question "Does music therapy affect the academic achievement of children with disabilities by improving their on-task behaviors in the classroom?" Undercoffer (1997) states that music can enhance student motivation, increase attendance and improve social skills. Data collection was done specifically through the use of an observational instrument, using a five point Likert scale. The instrument measured "on-task" performance before and after the already scheduled music therapy sessions for three weeks. As a whole group, no significant differences were found among total on-task behaviors prior to or after music therapy. Two themes emerged from the written comments of the Likert scale the first was the focus of the adult on the negative behaviors of the child. The second was teacher cuing, reminders or redirecting verbally of the child. The results of this study were extremely close to displaying significant differences among total on-task behavior

prior to or after music therapy. Several students showed improvement on the post music therapy session by a difference of at least five points on their post observational scores.

Introduction

What is the concern about children's time on-task in the classroom? From what I have observed, some children are on-task for a short while on any given activity. In my opinion, when a child is on-task, he or she should be actively engaged, which means that the body, face, and hands are attentive to the task. The child should have the materials that are needed to do the task in front of him/her. You should see the child taking turns and sharing his/her opinion about a topic. When a child is on-task the child learns and is able to explain his/her reasoning. The child will be a confident and self-reliant person who will be able to use his or her time wisely.

Why is time on-task important? First of all, if a child is not on-task, he/she will not learn the material. The child might become disruptive or inattentive, and therefore, he/she will fall behind in school. This lack of achievement will become a concern to the parents and the teacher, as well as to the administrators in that district. Early on, children's lack of on-task behavior is being monitored but often times, no action is taking place. Perhaps children's lack of on-task behavior is

because the task is beyond his/her level. The reverse may also be true in that the task may be too easy. On the other hand, the lack of on-task behavior could be that the child is not motivated to complete the task.

There is a variety of techniques and strategies available to help children learn to improve their on-task behavior. Some of these include breaking tasks into shorter segments, using positive reinforcement, developing behavior intervention plans, self-monitoring of behavior, and social skills training (Hunt & Marshall, 2002), and music therapy (American Music Therapy Association, 2005, p. 1). I have chosen to concentrate on music therapy for my thesis.

Music therapy is a "clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program" (American Music Therapy Association, 2005, p.1)

My research goal is to see what effect music therapy may have on on-task behavior in children with disabilities. If music therapy is effective in keeping children on-task then we will be able to utilize this resource in more classrooms. I would hope to find that

more teachers will use music therapy to increase children with disabilities time on-task if it is effective. If music therapy is not effective in helping children stay on-task then we need to analyze the problem further.

What do we know about music therapists and what they do? "Music therapists assess emotional well-being, physical health, social functioning, communication abilities, and cognitive skills through musical responses; design music sessions for individuals and groups based on client needs using music improvisation, receptive music listening, song writing, lyric discussion, music and imagery, music performance, and learning through music; participate in interdisciplinary treatment planning, ongoing evaluation, and follow up." (American Music Therapy Association, 2005, p. 1).

Music therapy involves movement and music. I believe that movement in learning is essential because it gets the child to stimulate his/her body and therefore he/she stimulates his/her brain. Personally, I feel that movement forces a person to use different muscles, and at the same time, be able to recall the information at the time of the activity. In my opinion, movement also engages students because it makes the lesson more

interesting for them. They are also often anticipating what movement may come next.

A couple of possibilities that may happen if music therapy is used while instructing are that the children will more actively use their brain and they will be more motivated to be on-task. The more that a child is on-task, the more he/she learns. The more on-task a child is there is potential of storing information into long term memory. I want children with disabilities to be on-task because they learn better and make connections with what they are learning. Also if music therapy does have an effect on the amount of their time on-task, then when I teach I would like to have this service in my classroom.

Ever since World War I, music has been used to soothe and comfort veterans from the wars at hospitals (American Music Therapy Association, 2005, p. 1). At that time, money was being used towards the costs of war, but there was limited amount of money to make the injured soldiers comfortable. Therefore, unskilled musicians entertained the soldiers at the hospitals.

As the demand for musicians increased, so did the need for them to be skilled. Therefore, the first

university to have a curriculum for music therapy evolved from Michigan State in 1944. In 1990, the Education for all Handicapped Children Act of 1975 was renamed as Individuals with Disabilities Education Act (IDEA) (PL 101-476). Related services were defined and clarified in the 1990 amendments to IDEA. In 1997, IDEA was revised again and emphasis was placed on educating children with disabilities with their general education peers (PL 105-17). Then in 1998, the American Music therapy Association was assembled as a union of the National Association for Music Therapy and the American Association for Music Therapy. (American Music Therapy Association, 2005, p. 1).

In December of 2004, IDEA was revised once again and is called the Individuals with Disabilities Education Improvement Act of 2004 (PL 108-446). IDEA has gone through many changes and restructures. We now have the law that states that we need to use all the resources available to educate our children and music therapy is one of them.

My research relates to the theories of two theorists, Erickson and Gardner. Erick Erickson (1950) states that children learn best through interactions with

peers. I agree with Erick Erickson in that the more social interactions that a child has in a classroom, the more he/she assimilates to the "real" world. I know from personal experience that children learn faster and make a deeper connection when they learn from their peers. In my case, I started to learn English when I was eleven and in the classroom, I would just sit quietly. Nonetheless, when I was with my friends, I was not intimidated to speak even if my pronunciation was slightly off. My friends would correct me and I was careful to pronounce those words correctly next time.

I did not want my friends to think that I was dumb and could not learn to speak English correctly so fitting in forced me to learn quickly and efficiently. This is the reason why I have chosen this theorist to base my research on. During music therapy the children sing, dance, and move while interacting with one another, just like I did with my friends. Music therapy will help them to open up to new ways of thinking and move them on to a higher ability levels.

Howard Gardner (1983) believes that humans have multiple intelligences. I agree with this because so many people can really learn just by listening, others by

sight, and others by movement, and so forth. People learn in their own way and that is why I believe that music therapy helps children learn in their own way. Music therapy has movement, visuals, sounds, and many other mediums that children can learn from.

An inclusion classroom is based on the notion that all children regardless of the disability will learn and that the teacher will educate equally. However, that does not mean that he/she will always do everything in the same way for all students. The teacher's first priority is to meet the needs individually of his/her student.

I believe that music therapy can be a great equalizer because students participate in it by doing the same activities and interacting with each other at the same level. By keeping my own experience in mind, when I design my own classroom, I will make sure that my students feel welcomed and appreciated. I would like to use music to soothe and calm their nerves of starting a new year. I will create an atmosphere that is diverse and inclusive. The students will work in collaborative groups where they learn from each other. I will also have clear expectations of the student's behavior and attendance. These procedures will be in place so that

they are in charge of their learning. I strongly believe that every child can learn. If the material or strategy captures the attention of the students, then they should be able to learn more successfully.

Now being in the classroom at my internship placement, I can see that music can be so much more exciting and interactive than when I sang in the choir at my school. The music therapist comes into the classroom twice a week. She brings with her all of the instruments and her lesson plans. She starts by singing a song to greet the students. She sings "Hello. How are you?" and walks around, letting them answer the song with their own "Hello. How are you? I am fine," and playing the tambourine. One of the students that typically does not seem to be engaged, gets so excited that he can hardly sit in his chair when we start to sing. All of the students play the instruments and follow all of the directions that are given during the music therapy lesson.

I can see that children come to life when the music therapist hands them a maraca and they can hardly wait to play. I am curious as to what effect the music therapy sessions have on their attention to tasks and on their

learning. My research question is "Does music therapy affect the academic achievement of children with disabilities by improving their on-task behaviors in the classroom?"

Review of the Literature

This researcher believes that children in the classroom setting are not staying on-task for long periods of time. This researcher believes that children should be attentive with their bodies and mind to the task at hand long enough for them to complete the task. In order for them to learn the material, it should be presented by the teacher in such a way so that it will go into long term memory and be retainable. In keeping this situation in mind, this researcher will discuss the following research question: Does music therapy affect the academic achievement of children with disabilities by improving their on-task behaviors in the classroom?

This researcher will review the research literature on music therapy and its effects on disabilities by analyzing and synthesizing other researchers' work. The researcher will review some strategies that have been successful for other instructors in the field on how to get children with disabilities on-task and how to keep them engaged. All of these strategies are according to the literature that this researcher found. This chapter will also cover the possible social and academic benefits of music therapy on children with disabilities.

This researcher believes that time on-task on any one of this subject areas is essential for a successful school year. Therefore, finding a resource that helps improve time on-task is a time-worthy research. Music therapy is an intervention that helps children with disabilities accomplish their individualized goals and objectives. Music therapy along with curriculum teaching as stated by McDonnell (1996) is another learning opportunity for a child who has a disability. Therefore, this researcher believes children with disabilities can benefit from music therapy and can have more opportunities to succeed in school.

In this researcher's opinion, teachers have traditionally taught children with disabilities in the two most popular methods of teaching by talking at them and by "covering" the material in a particular subject area. This researcher knows from experience what teachers do to "cover" the material. The teachers are short on time and therefore just go over the information, making sure that you get enough information to pass the test at the end of the unit. This method makes the students passive in their education, rather than making them active participants. When the children are passive

learners, they are just taking in a few facts about the lesson. However, when the children are actively engaged in the lesson, their brains are working faster and harder, helping them retain more of the information.

As John McDonnell (1996) found in his research which concentrated on engaged academic time for elementary children with and without disabilities, children "with low incidence disabilities were actively engaged in instruction. When academic responding and task management were combined, the average rate of engagement across all students and observations in his study was 78.5 %" (p. 17). This research states that the students are actively engaged when asked to participate or answer questions pertaining to the lesson by 78.5%. Taking this percentage into consideration, why would any teacher not ask questions of their students or ask them to participate in the lesson? This is especially true if the instructors have students in their classroom that have a disability.

McDonnell (1996) also found that there were no significant differences between the frequency academic responding and task management behaviors for all students. Therefore, McDonnell states "this study

provides additional evidence that curriculum, instruction, and personal supports can be organized in ways to provide students with low incidence disabilities with meaningful learning opportunities in general education classes, p. 17." This researcher believes that McDonnell's study is beneficial to all educators but especially to teachers in an inclusive setting. It shows that when the educators know the curriculum, plan their lessons accordingly, a high percentage of students will be attending to the task.

This researcher believes that although McDonnell found students with and without disabilities engaged for 78% of the instructional time, this percentage could be increased with some interventions. For example, instructors could use visuals, tactile objects, manipulatives, movement, singing, story telling, acting or any other intervention. The engaged time would only increase because the subject comes to life right before the students' eyes.

Wang, Bernas and Eberhard (2001) state that different scaffolding methods for children with Down syndrome do have an effect on their learning. They state that the most commonly used scaffolding technique is

speech-only instruction meaning that the teacher makes no face or hand gestures while teaching. The joint speech and gesture scaffolding is sometimes used, meaning the teacher makes either face or hand gestures while teaching. They state that gesture-only is seldom used meaning the teacher does not speak but uses face or hand gestures to teach. The researchers compared teacher preference on scaffolding techniques. There were no significant preferences in scaffolding techniques. There were no differences of scaffolding between teachers who had worked longer in an inclusion setting and someone who had just started teaching in an inclusion setting.

This researcher thinks that if there were no differences in the use of scaffolding techniques between the more experienced teachers and the less experienced teachers, then scaffolding techniques are not being taught to teachers to use. How can educators improve on-task performance if they don't have any instructional strategies to help them?

There were, however, differences in the results of the scaffolding methods. The students responded the least to speech (only) scaffolding. As this researcher stated before, being spoken to and not being involved in

the lesson is not interesting, therefore the students will not respond to the task at hand. This method does not individualize for the needs of each child.

The less frequently used scaffolding methods were joint speech-and-gesture scaffolding as well as gesture-only scaffolding. However, even though they were used the least, the students responded the most to those methods. This researcher believes that it is distressing to see that this study strengthens this researcher's belief about what goes on in the classroom. The educators are not using all the resources that they have available to them. Case in point is scaffolding. This is an easy strategy to use, and is not time-consuming. This strategy can be implemented in any classroom for any subject and with any child.

Even students that typically could maintain their focus became even more attentive and stayed on-task longer if the teacher used gesture components when giving directions (Wang, Bernas and Eberhard, 2001, p. 78). This researcher thinks that making gestures with our hands or face is something that any educator can do to improve our students' time on-task.

Music therapy gives the children the opportunity to

move and be actively engaged in the lesson. "Studies conducted over the last two decades have repeatedly shown that one of the best predictors of student achievement is the opportunity for the learner to be actively engaged in instruction" (Brophy & Good, 1986, p. 328). This researcher believes that music therapy should increase the time on-task performance. Therefore, there is need for this study.

It is stated by Charles, Olson, and Zurkowski (1999) that humans have a physical response to music therefore making it an influence over us because our biological being is a rhythmic entity. "Sedative music was noted to calm the emotions of disturbed children" (Charles et al., 1999, p.44). If music is part of our being, like breathing or thinking, then why don't we utilize it for the betterment of our students?

"Listening to classical music has also been shown to reduce general and task-related anxiety while triggering increased alpha wave activity in the brain, both of which brings the added bonus of enhanced concentration. Music has been shown to induce not only physical relaxation but also mental clarity" (Blumenstein, et al, 1995, as cited in Coyne, Dwyer, Kennedy, Petter, 2000, p. 14). This

researcher thinks that if the music therapist is able to use music to stimulate alpha waves in the students then we should have him/her in the classroom everyday, so that our children can be ready to learn.

Undercoffer (1997) states that music can enhance student motivation, increase attendance and improve social skills. This is further emphasized by Howard Gardner in his theory that music is a distinct intelligence. He also states that music helps some people organize the way they think and work by helping them develop in other areas, such as math, language, and spatial reasoning. Paul Haack agrees with Gardner's theory by stating that "music literacy is essential in today's marketplace because it enables people to make sense of their environment and make appropriate choices" (Undercoffer, 1997, p. 17). This researcher thinks that music can help a child have a life by giving him/her the skills to process all the information thoroughly. With all the areas that music can impact and improve, why wouldn't educators want to use it?

In regards to children with communication disorders or limited speech, Humpal and Dimmick (1995) recommended using augmentative devices during music therapy. For

example, using symbol systems, electronic speech synthesizers, and switch-activated tapes can help by having a song go on a loop (playing itself over and over). For students that have limited mobility or physical difficulties, they recommend an adaptation for the equipment so that they children can actively participate. This researcher thinks that with this technology, every child can be made a part of the classroom and we can fulfill the individualized goals and objectives that are stated in some students Individualized Education Programs (IEP), which are required by law (IDEA) to comply with (IDEA regulations 34 CFR 300.347, 20 usc 1414 (d) (4) (A)).

In a study conducted by Coyne, Dwyer, Kennedy and Petter (2000), students in some classrooms were already exposed to music during morning arrival, lunch, rest time and art activities. The researchers took anecdotal notes on the following behaviors: following directions, exhibition of self-stimulatory behaviors, and increased arousal in low-effect students. The direct observations of the students were done by the teachers of the classrooms. An interesting fact that they state is that although they played rock, pop and alternative music, the

children and adults quickly embraced classical music as a favorite and it was even requested. This researcher believes that any type of music can be enjoyed because of individual preference. However, classical music is richer in instrumentation and patterns of repetition and rhythm, which it makes for a perfect calming and soothing choice.

In regards to self-stimulatory behaviors, these researchers found that the behaviors decreased in some students. The student did not demonstrate significant improvement in following directions. A student who displayed low affect showed positive response and an increase in arousal to music. Music also had a calming effect on staff. They also mention that external stimuli can have a negative impact on the targeted behaviors, for example, class noise and unexpected interruptions. Therefore, teachers that teach using music need to make sure that they establish routines and ground rules with students on how to work with instruments.

The researchers kept reflections of these classrooms in their anecdotal records. They state that music has different effects on the students. For some, it causes a soothing effect; for others, it is energizing.

"Generally, music seemed to enhance, at some level, simple day-to-day functioning within the classroom" (Coyne, Dwyer, Kennedy and Petter, 2000, p. 52). This researcher thinks that the difference that music has on each child accounts for the individualization of them as well. Music takes into account that one child might not like the sound that a drum makes, but loves the flute. Each child is unique and therefore, we need to find the particular way in which that child would be best taught.

"In music therapy, music is used as a nonverbal and nonthreatening means of communication..." (Hooper, 2002, p. 168). The children can socialize without saying a word, and can make music together which creates a bond between them. Hooper states that the participants are encouraged to communicate through music rather than words. Two students, however, did not use words but interacted by making music. Hooper also implemented some controlled activities so that the participants would have to rely on words. He also anticipated that music activities would be the more effective interventions in encouraging interactions. This research shows that music can be used to create a warm and welcoming environment. This environment can foster interactions between students and

can foster learning. This researcher thinks that the children who did not speak were content with the stimulation of the instruments, and being able to make music with another person can give a deep connection with that individual.

Hooper states that "music therapy was the least effective intervention" (p. 167). He states that during the therapy they were supposed to help each other take turns using the bells or playing the drums and that did not occur. "It confirmed that music activities and ball games encouraged purposeful interactions by offering a nonverbal and non threatening form of intervention. The results highlight that making music within a structured activity was not only an enjoyable experience, but also one of therapeutic value" (Hooper, 2002, p. 169).

Jones (1960) agrees with Hooper that music can be very beneficial to children. He states that "If education results in an individual's development for social adequacy, it is then easy to accept the concept that music aids in enriching and enlarging horizons for social living" (p. 14). This researcher agrees with the subsequent authors. Music therapy has an effect on all aspects of learning, including socializing, movement,

thinking, writing and even processing. On the other hand, this researcher believes that there were limitations to Hooper's study in that it was conducted in ten sessions and in the subjects' apartments, as well as the fact that these were adults, not children.

In summary, there is a limited amount of research on the effects of music therapy being used in the classroom setting with children with disabilities. This researcher plans on implementing a study to gather more data on how music therapy affects the academic achievement of students with disabilities by improving their on-task performance. This researcher hopes to find that music therapy is an effective strategy and that it has an effect on children's on-task performance. As a result of this knowledge, general and special education teachers can take advantage of, and use, music therapy in their classrooms. This researcher hopes that music therapy can be used in all inclusive classrooms.

Methods

This researcher would like to know why children are not staying on-task long periods of time in the classroom. This researcher's research question is to see if music therapy affects the time on-task of children with disabilities in the classroom. The research design used is both qualitative and quantitative. This researcher will use an observational study as the method of gathering both qualitative and quantitative research data. This project is an observation study which will involve the examination of the effects that music therapy has on students' academic work and time on-task, within a self contained classroom setting.

This study is important because teachers need to always be looking for strategies that help improve their students' performance in the classroom. It is the hypothesis of the researcher that teachers need to continue to increase their knowledge about students with disabilities and music therapy and incorporate their knowledge in the field of education in order to effectively meet the needs of all learners.

Participants

Eligibility for participation will be open to all

seven students in this classroom who receive music therapy services at a public school in a suburban school in Western New York. All of the seven students (N=7) that are eligible to participate come from a two parent household. Their socioeconomic status is middle class or average, based on the fact that none receive free or reduced lunch. The participants are mostly categorized with speech and language disabilities (See Appendix A).

Instrument

Data collection will be done specifically through the use of an observational instrument, using a five point Likert scale (See Appendix B). The observational instrument was created by the researcher for the purposes of this study. The Likert scale is defined as follows: 1= being out of their chair, no engagement; 2= sitting not working; 3= sitting, feet on floor, somewhat on-task; 4= sitting, feet on floor, hands working mostly on-task; 5= sitting, feet on the floor, hands working, eyes focused and completely on-task. In addition there will be a space provided for open-ended comments. This instrument intends to measure "on-task" performance before and after the already scheduled music therapy sessions. The validity of the observational instrument

will be judged by a panel of three experts in observational studies on the face validity of the observational instrument.

Procedures

This researcher will observe and record the "on-task" performance of the participants to see if there is a difference in the span of time that the participants stay on-task before and after music therapy sessions. The observations will be completed every day for three weeks during the regularly scheduled Reading, Math or Language Arts center activities. The confidentiality of the participants will be protected. The researcher will assign a letter to be able to identify each child. Therefore, all research will include references to letters of the alphabet (i.e. "student A," "student B," "student C," etc.).

Planned Analyses

This researcher plans to analyze the data collected by running a Paired Sample T-Test on participants' "on-task" performance pretest and posttest scores before music therapy and on-task after music therapy. This researcher plans to investigate the correlation between these variables of on-task performance before and after

music therapy. The researcher will analyze the qualitative data gathered through the use of the open-ended comments, which will be provided on the Likert scale. The reliability of the observed responses will be computed using SPSS, (Noonan, 2005, version 13.0).

Results

The researcher was intrigued to find that music therapy when used as intervention can help children with disabilities by aiding in the accomplishment of the students' goals and objectives (American Music Therapy Association, 2005, p. 1). This research was guided by the following research question: Does music therapy have an effect on the on-task performance of children with disabilities classroom? Therefore, this researcher investigated the phenomenon of children being off task when they are supposed to be engaged on particular activity. A session of music therapy involves many areas for instance movement, language, listening, and imagination. It is this researcher's belief that if we as teachers can utilize more than one way to teach a subject, the students will be more open to learning.

This researcher conducted the planned analysis on SPSS (Noonan, 2005, version 13.0) to gather inferential statistics, using a Paired Sample T Test to determine whether there was a significant difference of time on-task before or after music therapy. Table One summarizes the comments on student performance. Procedures and analyses proceeded as planned.

Descriptive Statistics

The reliability of this instrument was computed using SPSS (Noonan, 2005, version 13.0). Reliability was computed to be .59 which states that this observational instrument was 41% reliable. A panel of three experts in the field of special education validated the observational instrument used by this researcher. As a result, the research study was carried out as planned.

Table Two displays the means earned by students during the three week period without music therapy, pre-music therapy and post-music therapy. The students that participated in this study had nine days without music therapy which gave a mean of days without music therapy of $x = 28.9$. The students had a total of five days for pre-music therapy scores; the total mean was $x = 4.5$. The students had five days of post-music therapy scores; the total mean was 4.2. The individual mean scores are also displayed in Table Two.

As a whole group, no significant differences were found among total on-task behaviors prior to or after music therapy ($t = -1.45$, $p = .08$). In order for there to be significance, the p had to be $< .05$, and as can be seen, this study did not reach that level of

significance. This study does show that five students (B, C, D, E, and G) scored higher on their Likert scale scores during the post-music therapy observation.

Qualitative Results

The data collection for this study included multiple qualitative observations of behavior, by staff in the classroom. Comments were collected and analyzed for emerging themes or patterns. Six non-certified personal and one intern (N=7) recorded behaviors.

The first theme to emerge is the focus of the adult on the negative behaviors of the child. The seven adults made a total reference of 18 comments to negative behaviors for the seven children observed. Each child had at least one negative comment about his/her behavior. One of the para-professionals stated that the student was "too upset to do any work". Another para-professional's comments included "refusal to sit" or "very vocal, not engaged, active body, swiping, feet on table".

The second theme to emerge is teacher cuing, reminders or redirecting verbally of the child. One para-professional stated "worked when re-directed" or "needed redirecting and reminders". Another para-professional's comments included "reminders given often"

as well as "focused with verbal prompts". In total the seven para-professional made references to cuing a child eleven times.

Inferential Statistics

Information gathered from the Likert scale was used to run a Paired Sample T Test. The information obtained is displayed in Table Three. This table illustrates the mean of total scores for pre-music therapy observations and the total scores for post-music therapy observations. On this table the correlation is also displayed. This researcher ran a correlation on the pre and post observations for music therapy. Unfortunately, there was no correlation between the pre and post observations for music therapy.

The findings of this researcher's study will be discussed in the next section.

Discussion

This researcher was interested in studying why students are off task at times and whether there was a service that would help students to maintain focus for longer periods of time. Therefore, the researcher set up an observational study where data could be collected to see if music therapy could have a positive influence on the students' academic and time on-task without affecting the normal schedule of the students. The researcher elicited the help of the para-professionals for time purpose and so that it would be less intrusive by being in a natural situation. The observational study was conducted in a total of three weeks.

Consequently, music therapy seems like a logical service that should be implemented into the classrooms to help all students learn. Therefore, this researcher believes that music therapy will have a positive effect on students' on-task performance. In one session, music therapy uses different disciplines to assist the student in learning the lesson like movement, language, rhyming and imagination. This researcher feels that with all these disciplines being used at once in just one lesson, educators would want to implement this service into their

classroom.

Limitations

The study was conducted in a Western New York elementary school that had a middle-class social economic status. Therefore, this study should not be generalized into other school settings. Other limitations that might have also influenced the results of this study are the fact that this researcher had access to a small number of participants for a total of seven. This researcher also had only three weeks, a relatively short amount of time to carry out the study. There were unforeseen or unplanned for circumstances which caused the loss of data collection. These included the absences of either students or para-professionals, as well as the cancellation of a music therapy session.

Review of Data

It is very interesting to see that even though this study was not conducted for a long period of time nor with many students, the significance level was almost reached. Even though there was no correlation between the pre and post-observations, the researcher noted some positive results nonetheless. The results of this study were extremely close to displaying significant

differences among total on-task behavior prior to or after music therapy. Some individual students showed improvement on on-task performance however, the group as a whole consisting of seven participants did not show significant difference. Several students showed improvement on the post music therapy session by a difference of at least five points on their post observational score.

John McDonnell's (1996) research confirms this researcher's belief in this study in that if children are asked to participate and are being led through an activity they are more like to be on-task. McDonnell was able to ascertain that students were more attentive for a lesson when they participated and asked questions. Music therapy is a service where the student can not be passive. Therefore, they must participate constantly.

In this study the music therapist always asked each of the students' questions to make sure that they understand the lesson and to make sure that they know how to use their instrument. This study found that five out of the seven participants were more on-task after receiving music therapy services based on the score given to them by the paraprofessionals on the observational

instrument.

Other researchers that also validated by research were Wang, Bernas and Eberhard (2001) in that they stated that the more ways that a teacher uses scaffolding techniques the better the students will learn. That is why music therapy fits so nicely into any classroom. The music therapist does facial expressions, hands on guidance, singing, dancing and visual cues. This service lends itself to many scaffolding techniques. Even though this study did not show significant difference, it did show that some students had a higher mean score of on-task performance after a music therapy session. This leads this researcher to believe that music therapy does have an effect on students' academic on-task performance.

Future Research

Therefore, the next step in the research should be to do a longitudinal study. This next study would eliminate some of the unforeseen circumstances in this first study. This researcher assumes that results would have been substantial if there would have been more participants. This researcher would recommend that at least 120 students should participate in the longitudinal study half with music therapy services and half the

students without them. Another recommendation is to have the same observer record the data and to have that person record observational data related to each individual student's Individualized Education Program (IEP) communication, social, and or behavioral goals. Further research would give a clearer view into whether music therapy has an influence on children staying on-task, or on other skill areas or areas of development.

Summary

Through this process, this researcher learned that a wide range of factors could influence children's off task performance. Their motivation is not just enforced by how the material is displayed. This knowledge is critical to this researcher as a future educator because this researcher to be aware of not only the factors that can be seen as well as the factors that are not as evident. Therefore, this researcher will look for services that are research based to help improve the task performance of her future students. This researcher believes that this study will give some current or future teachers one more resource that they can implement into their classroom and then they can judge for themselves if it is useful for their students.

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Appendixes

Appendix A

Student Background

M	MD	Suburban	English	2parent	Anglo	No
F	Speech	Suburban	English	2parent	Anglo	No
M	MD	Suburban	English	2parent	Anglo	No
M	Speech	Suburban	English	2parent	Anglo	No
M	Autism	Suburban	English	2parent	Anglo	No
M	Speech	Suburban	English	2parent	Anglo	No
M	Autism	Suburban	English	2parent	Anglo	No

Appendix B

Observational Instrument

PRE Music Therapy (On Task Performance)

Date _____

Student _____

1	2	3	4	5

Comments: _____

1=out of chair/not engaged

2=sitting/not working

3=sitting, feet on floor/some what on task

4=sitting, feet on floor, hands working/mostly on task

5=sitting, feet on floor, hands working, eyes focused/completely on task

POST Music Therapy (On Task Performance)

Date _____

Student _____

1	2	3	4	5

Comments: _____

1=out of chair/not engaged

2=sitting/not working

3=sitting, feet on floor/some what on task

4=sitting, feet on floor, hands working/mostly on task

5=sitting, feet on floor, hands working, eyes focused/completely on task

Tables

Table One

Comments on Student Performance

	StudentA	StudentB
1		
2		Too upset to do any work
3	Had great difficulty writing with "birdie" fingers	Calendar-suppoded to participate but didn't
4		Worked on puzzles
5		
6		
7		
8		
9	Yawning, head down, stairing	Student helper, distracted when answering questions
10	Reminders to stay on task	Worked on reading and phonics, much accomplished
11	On task	Late from Dr. appt, inattentive, gave her breakfast
12	Kept his cool even when he made a mistake&restarted	Craft project well, Lost control-when two more services given
13		Worked with sub in reading, distracted
14	Upset made a mistake was able to self correct it	Worked on cover of own book
15		
16	Did not want to stop coloring and start cutting	
17	Working and listening	Listening and working on handwriting
18	Listening to puppet show	
19		

	StudentC	StudentD
1		
2	Absent	Hands in mouth, vague in answering, many prompts
3	Participating in the dance	Did very well, even when a student was distracting
4	Coloring a packet before the beach party	Reminders given often
5		
6	Re-directing needed	
7	Took a long time to do task and much re-directing	Focused with verbal prompts
8		
9	Making a book, minimal redirecting	Participated in several areas of circle time
10	Very focused at centers, little to no re-directing	Verbal prompts for participating
11		Behavior improved as time progressed, better out of seat
12		
13		Verbal support, seemed to improve w/sensory ball
14		Eyes away from speaker, hands in mouth, some hand raising
15		Filled in calendar on own
16	Very vocal, not engaged, active body, swiping, feet on table	Repeated fixations
17	Removal from classroom	Working slow, much re-directing, trying to get out of work
18	Did not do Math work, counted when asked to	Not listening
19	Active listening to two storied, participated	Little more alert, not willing to follow directions

Table One

Comments on Student Performance

	StudentE	StudentF
1	Using highly preferred item as reinforcer	remained on task with reinforcement
2	A lot of spitting, difficult b/c above ability	Good morning @ circle time, keeping track of others
3	Working for highly preferred objects	Controlled behavior & stay on task w/no meltdown
4	Even with highly preferred item off task	Craft activity
5		
6		
7	Refusal to sit	
8	Calmer, worked for highly preferred item, no hitting	
9	Not working even with highly preferred item	
10	Working for highly preferred item, distracted by people	Still sick, Participating well, giving orders to peers
11	Did job where expected to participate, @ times not engaged	
12	Worked in centers, happy laughing, mostly cooperative	
13	Working for something after each task to keep on track	On task, got upset when teacher went out of order of events
14	Had to be removed from classroom	Good listening to re-redirect
15	Calmer, worked cooperatively w/reinforcers	
16	Answered questions, little re-direction	Alert, able to stay on task even when another child was upset
17	Working hard w/reinforcers, showing sense of humor	Testing-much refocusing
18	Very vocal	Bossy but attentive
19	Working for reinforcers but more game playing	

	StudentG
1	
2	needed redirecting and reminders
3	
4	
5	
6	Putting head down
7	Uninterested, not fully paying attention
8	engaged listening
9	
10	Engine running fast, not focused
11	Distracted by being helpful to teacher
12	Good transition, focus decreased after 10 min
13	
14	Trouble staying seated
15	Did very well in OT
16	Worked when re-directed
17	Seemed tired, distracted-need coaxing to color some parts
18	
19	

Table Two

Student's Mean Scores from Likert scale

Students	Mean Score of nine days without music therapy	Mean Scores of five days for pre-music therapy	Mean Scores of five days for post-music therapy
A	4.2	3.8	3.4
B	3.4	1.4	2.3
C	2.8	1.0	1.2
D	3.1	2.4	2.9
E	2.1	1.8	3.2
F	3.0	2.1	1.6
G	3.6	2.5	3.0

Table Three

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TotalScorePreMT	10.714	7	4.5264	1.7108
	TotalScorePostMT	12.571	7	4.2074	1.5903

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	TotalScorePreMT & TotalScorePostMT	7	.701	.079

Paired Samples Test

		Paired Differences					t
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		
					Lower	Upper	
Pair 1	TotalScorePreMT - TotalScorePostMT	-1.8571	3.3877	1.2804	-4.9902	1.2759	-1.450

Paired Samples Test

		df	Sig. (2-tailed)
Pair 1	TotalScorePreMT - TotalScorePostMT	6	.197

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