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Review of the Literature: Impact of Music on Children with Special Needs

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HEADER: Review of the Literature: Impact of Music

Rembrandt, though poor and alone toward the end of his life, painted masterpieces that point toward healing and an investigation of self. Michelangelo described sculpting as a way to reveal soul and as a way to find self (Kearsley, 2011). These examples of master artists illustrate how art plays a major role in the concept of finding self, self-expression, and healing. Art is not only beneficial to those who receive; it is also beneficial to the ones who engage in its creation. This sets the context for looking at the arts as therapy in multiple contexts; there is a long history of art therapy that has existed and evolved for centuries in a variety of formats. There is a need to explore art as therapy for different populations, including the impact that it has on students with special needs.

Not only is there a place for music in the schools, there is a calling for it to be taught in the special education classrooms. Students with special needs can greatly benefit from music therapy, for example, to reinforce academic material and to promote psychomotor skills. Social skills, communication, mood change can all be benefits from the use of music in the special education classroom (Darrow, 2011). In addition, music can positively impact students with special needs in the realms of behavior management; even self-esteem and reduced anxiety are noted as benefits (Hillier, Greher, Poto & Dougherty, 2011).

This paper is an examination of the research literature on music and students with special needs. Information was gathered from academic library searches of peer-reviewed articles using online resources.

While much research exists on the general benefits of music with students, little is known about the impact of music on students with special needs. What impact does music have on students with special needs? Simpson and Keen (2011) conducted a literature review of articles, which identified that music positively impacts children and individuals with autism. They conducted a comprehensive search with criteria they identified to discern if a study was relevant. Of 128 studies they identified, only 20 met their criteria. Articles were published in a peer-reviewed journal, participants were individuals (0-18 years old) with autism, participants were not musical savants, and lastly the studies demonstrated experimental control by using musical intervention. The focus areas concentrated on were communication, socialization, and behavior skills. The authors created a table, which listed all of the relevant music studies they identified.

Improvisational Music

The use of improvisational music versus play were studied in South Korea on groups of children with autism, ages 3 to 5, to examine the effect on non-verbal social communication and joint attention behavior (Kim, Wagram & Gold, 2008). Joint attention behavior is described as joint engagement that involves the child, therapist, objects or events in either musical form or play. This 7 to 8 month qualitative study involved 10 children. Each student had 12 weekly 30-minute improvisational music therapy sessions and 12 weekly 30 minute play sessions with toys. 2 music therapists, 1 play therapist, and 3 graduate students conducted the research. The student population came from the Department of Child and Adolescent Psychiatry at Seoul National University Hospital, and the clinical trials took place at Kim's clinic in Seoul, Korea. Data were collected in two ways: by video recording each session and then reviewing and analyzing the DVD, and by both participants' mothers and researchers completing a behavior rating scale before, during and after the study. Overall results suggest that music therapy is a more effective tool to improve joint attention behavior and communication in children than play. Both turn taking and eye contact duration were increased in students through music therapy as compared to the play condition. Additionally, anecdotal reports from the music therapists and parents showed

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that 3 of the 5 participants who were non-verbal at the beginning of the study began to develop some initial language skills during and after the music therapy condition.

Enhancing Communication

An additional study showed that music therapy could be used with children who have autism as a way to enhance communication (Markworth, 2014). In this qualitative study, children between the ages of 3-6 underwent music therapy sessions with Nordoff-Robbins music therapist. Three children who had limited verbal language skills and 3 music therapists participated in the study. Each session consisted of one therapist and one child; each child received 3 music therapy sessions. Data were collected by videotaping and analyzing each session. In addition, the music therapists were interviewed by Markworth at the conclusion of the study. Three categories of communication emerged from the data: Music Language, Music Expression, and Music as a Shared Experience.

Results of the study indicate that music can be used as a communication tool with children who have autism and also who have limited language skills. A music language was developed between teacher and student through the music therapy sessions. "Through this trusting partnership and shared language, the client and therapist were able to communicate ideas, validation, questions, invitations, preferences, conversations, disagreements, personality traits, emotions, humor, and acknowledgement" (Markworth, 2014, p. 34).

The impact that background music and the use of songs with text has on students with autism with regards to enhancing emotional understanding and socialization was studied by Katagiri in 2009. This qualitative study took place in Osaka, Japan and involved 12 students with autism, ages 9-15. Sessions met twice a week, in total there were eight thirty-minute sessions. During the session, participants were given verbal praise and a sticker at the end of each session. The student groups were taught 4 emotions over 4 different control conditions. The emotions were: happiness, sadness, anger and fear. Control conditions were as follows:

- A. Emotions were not taught in any way.
- B. Emotions were taught using verbal instruction only.
- C. Background music that correlated with a specific emotion was played as the verbal instruction for that emotion was taught.
- D. Songs with lyrics were used to teach emotions.

Data were collected by conducting pre and posttests which contained four subtests each. Three of the subtests were based on the student's skill in decoding emotions. The last subtest measured the student's ability to encode emotion. Results from this study showed an increase in participants' understanding of emotion from pre- to post test. However, the two conditions that involved music proved to be more effective than the conditions that did not contain music. In addition, parents reported that the children enjoyed the conditions with music much more so than the conditions that did not contain music.

Another study, which speaks to the impact that music has on students' socialization, was conducted to evaluate the impact that personalized morning greeting songs have on students with autism (Kern, Wolery & Alldridge, 2006). This study focused on two boys with autism, both three years old. Both children had limited speech, difficulties with transitions, and showed limited social interactions with their peers. An individually composed greeting song was created for each of the participants, and sung upon their entry to the classroom. These songs were created to speak to each child's personality and lyrics conveyed the five-step morning

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routine that was already in place. Both teachers and peers engaged in singing the morning greeting song upon the participant's arrival.

Data were collected by the observers through direct observation which begun once the child and caregiver entered the classroom and ended when the child picked up a toy or object in the classroom. Data collection sessions lasted anywhere from 2 to 10 minutes. One child was observed for 28 sessions, occurring over 2 months. The other child was observed for 31 sessions, occurring over 3 months. The results from the study show that the greeting songs helped facilitate smoother transitions in the mornings for both of the participants. In addition, for one of the participants, the number of peers that greeted him during the morning greeting song were tallied. As a result of the morning greeting song, the number of his peers that greeted him increased.

A qualitative study took place, which illustrates the power of merging music and technology to create increased socialization among participants. A pilot music program was created for adolescents and young adults who were on the autism spectrum in order to evaluate how music therapy would impact participants' levels of self-esteem, anxiety, and peer relationships (Hillier, Greher, Poto & Dougherty, 2011). This qualitative study took place over 8 weeks, and involved 22 adolescents and young adults between the ages of 13 and 29. Participants in the study worked as a group to produce a short movie and sound track, thus integrating the arts and technology. Groups met for 90 minute weekly music sessions, led by music education students and students majoring in psychology at the University of Massachusetts Lowell.

Data were collected by the use of questionnaires completed by both the participants and their parents or guardian, before and after the music therapy program. For weeks 2-7, participants completed a questionnaire, which measured anxiety, before and after each weekly music session. Results indicate, "participants showed significantly higher self-esteem, significantly lower self-reported anxiety, and significantly improved attitudes toward peers" (Hillier et al., 2011, p. 209).

Music As A Therapeutic Tool

Expressive arts therapy and the expressive use of music is a therapeutic tool, which helps children who have experienced trauma (Davis, 2010). Twenty students, age 8 to 11 years old, participated in counseling that involved music therapy as a part of healing and processing, following a natural disaster. Students were both male and female, lived in the Southeastern United States, and came from Caucasian and Latino ethnic backgrounds. This was not a formal study; the author simply described the creative musical activities that were incorporated into the sessions.

Students used these activities as a way to process and express their own feelings surrounding the natural disaster they experienced. Music therapy for children who have experienced trauma can be particularly impactful if the child does not have the language or ability to express themselves otherwise. Davis states, "Because young children are frequently at a loss for words and do not always have the vocabulary to articulate experiences or feelings, I chose to use an expressive arts activity that focused on processing feelings through...music" (Davis, 2010, p.129).

The author does not state whether any of the subjects were ones with special needs or disabilities. Although this study was not conducted on students with special needs exclusively, the implications are the same for some students who are on the autism spectrum.

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Students with Autism Spectrum Disorder may have difficulty expressing themselves or difficulty with social communication; thus music therapy is a way for these students to do so non-verbally. “Creative and expressive arts activities are well suited for children who often do not have the words or vocabulary to explain or express complex feelings and experiences. The use of music as a medium to express feelings was a simple and concrete way for them to communicate such complex inner experiences” (Davis, 2010, p. 131).

Impact on Academic Performance

Few studies exist that measures the impact that music has on special needs students’ academic performance. The one article that was identified is reviewed as follows. A qualitative study incorporated the use of background music during writing instruction with students who had learning disabilities; the purpose was to identify if music had a positive effect on the students’ writing performance, in both quality and fluency (Legutko & Trissler, 2012).

In this 21-week study, participants were enrolled in a suburban public elementary school in the mid-Atlantic region of the United States. All students received instruction in a Learning Support classroom and were all diagnosed with a Learning Disability in reading, writing, or both reading and writing. There were a total of 9 participants in 6th grade, who were between 11 and 12 years old. The study was comprised of 3 sections. The first section was 6 weeks long, and no music was incorporated in writing instruction. The second section was 7 weeks long, and background music, such as, up-tempo Mozart pieces during writing instruction. The third section of the study was 6 weeks in length, and during this section, background music was taken away.

Once a week, participants were given story starters. They had 1 minute to think about the topic, and 3 minutes to complete their writing. Students were graded on correct use of spelling, punctuation, capitalization, and if their story/words made sense.

Results from the study show that all students improved their writing from the baseline assessment. In addition, when there was any change in environment, scores dropped noticeably and quickly. “This likely shows that consistency in routine is essential to the academic performance of students with learning disabilities, and that variability or change in routine is both a distraction and a hindrance in performance” (Legutko & Trissler, 2012, p. 7). However, only 5 participants performed better on average, with the use of background music. Two of the participants performed better without the use of background music, while 2 participants performed about the same with or without the use of background music.

Summary

After reviewing the literature, several implications for practice can be made. Music has been proven to be beneficial in the areas of communication, academics, socialization, and behavior skills in typically developing students; but what about students with special needs? Most of the peer-reviewed articles and studies spoke to the impact that music has on students with special needs in the aspect of socialization. There were some studies that addressed the impact that music has on aspects of socialization, but not nearly as many as the ones on communication. Few articles explored the impact that music has on students’ academics, and the studies were experimental and had many limitations. No articles were found that spoke to aspects of behavior. Thus, there is a need for more studies to be conducted, and for studies conducted with typically developing students to be replicated on participants with special needs. In addition, there is a need for more studies that involve an increased number of subjects, as the number of participants in the studies was generally low. Of course this comes with the territory, as the population is quite unique. Still, there is an overall lack in the number of studies that

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involve music and students with special needs. The majority of the participants in the studies that involve students with special needs were on the autism spectrum. Therefore, more studies need to be conducted that use participants with other diagnoses or disabilities, not just autism.

The use of technology is important and necessary as 21st century skills are highlighted and taught in the classroom. To make music more relevant to students, it is important to not forget the use of technology as a tool of engagement. This brings up further questions: *is music relevant to today's students, to the audience? Does the music that students are exposed to (if they are at all) in the schools excite and motivate them? Are students truly connected to the music that is presented to them in the schools?* We want to ask questions, and keep asking questions, to students and to parents about music. One important underlying point in all of the studies: the simple fact is that these students simply *enjoyed* music. In the articles, parents commented frequently that their son or daughter simply *enjoyed* the music component, the music therapy, and the music condition. When one simply likes or enjoys an activity, motivation is usually present. Therefore, it is not a surprise that all of the studies point toward the positive impact that music has on communication, socialization, the processing of feelings. Music is an interactive tool, increasing socialization and interactions.

Some practical implications for practice regarding the impact that music has on students with special needs include the use of a morning greeting song or simply the use of music to aide in transitions. Music is a tool that can be used to elicit emotions in the classroom—to calm down, to excite, or signal the start or close of an activity. Also, using background music to help teach or simply discuss emotions with students can be a valuable and simple tool (Katagiri, 2009). Background music has also been shown to improve the writing ability of students with disabilities (Legutko & Trissler, 2012). Finally, because of the benefits that music brings, it belongs in the classroom, for all children, and daily.

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