## **Music Therapy For Autistic Children**

In the State of Utah, 1 in 54 children have been identified with Autism Spectrum Disorder, which is the largest rate of autism in the nation (Bilder). At this rate, 17,269 of the 932,526 children in the State of Utah have autism (U.S. Census Bureau). Not every child has the means necessary to receive medical care for autism. Patients in Utah County can wait for as long as a year in order to receive care or a diagnosis. Family relationships suffer due to the draining task of patiently caring for an autistic child. Children are misjudged due to a lack of their communication skills. Autistic children struggle to maintain valuable relationships, thus creating undesirable loneliness. Autism has become an epidemic for all children. Researchers have yet to find the root of this dilemma, or its solution.

According to Centers for Disease Control, "Autism is a brain-based disorder and developmental disability characterized by social-communication challenges and restricted repetitive behaviors, activities, and interests. This disability can cause significant social, communication, and behavioral challenges." There are many signs that a child might possess this disorder such as having unusual reactions to the way things smell, taste, feel and/or look, getting upset by minor changes, avoiding eye contact, preferring to be alone, flapping their hands, rocking their bodies or spinning in circles (Copeland). One can receive help for their autistic child from an Autism Spectrum Specialist or a Music Therapist. However, these doctors and specialists can only treat the symptoms of the disorder because there is no cure.

Music therapy has proven to aid children with autism. Music therapy is the "clinical use of music interventions" that guides a patient to achieve individualized goals within a therapeutic relationship (American Music Therapy Association). This relationship addresses physical, emotional, cognitive, and social needs of the patient.

During a music therapy session, the therapist undergoes the following stages: assessment, goal-setting, activities, and evaluation (Therapy at a Glance). Assessment begins by evaluating the child's needs. Goal setting involves devising an individualized schedule to fit the patient's needs. Activities are designed within the schedule to fulfill the goals set during the assessment. Some examples of activities are as follows: imitating movements to words as the child is learning to speak, telling a story to well-known child's tune to build comprehension skills, singing in a silly voice, creating sound effects, or playing with bubbles to increase motivation, and tapping to the beat with each syllable when improving speech (Autism Music Therapy). At the end of the session, the therapist will "evaluate" the child's progression and discover ways to further it. Children attend therapy sessions once every week on average. The duration of the session is based off of the patient's needs.

E. Thayer Gaston, also known as the "father of music therapy," influenced music therapy in an institutional and academic standpoint (American Music Therapy). His influence expanded from 1940-1960. Gaston's influence on music therapy began when he was financially unable to pursue a medical career. Through a painstaking process of convincing doctors that his musical talents could help influence human behavior, doctors at the Menninger Foundation in Topeka, Kansas acknowledged and encouraged his ideas in the 1940s (Johnson).

Music therapists then began to apply their methods to autistic children. These pioneers emphasized employing music diaperists and music therapy volunteers. During this time, the United States experienced a deviation toward a holistic treatment philosophy, especially treating psychiatric disorders. The first music therapy training programs were created, allowing this practice to expand to the public. In 1950-1974 music therapists adapted child directed improvised music. Improvised music allows the patient to guide the therapy session, rather than the therapist to take control and make demands during the session. These techniques support and encourage expressive language and social skills. Music therapy began to expand internationally by forming and creating organizations in several countries such as Canada, Germany, Australia, United Kingdom, and Denmark in the 1970s. Today, music diaperists focus on "evidence based medicine" to advocate for the validity of their work (Reschke-Hernández). Even though music therapy has improved throughout the years, it has not grown in proportion to the high autism rates.

Utah State University is the only university in the state of Utah to teach music therapy. This university is one of seven music therapy programs in the Western United States. In order for students to be certified music therapists, they must fulfill standards set by the American Music Therapy Association. These standards include the fundamentals of theory, composition, and performance, as well as therapeutic principles, applications, and relationships. In order to receive a diploma from Utah State University, students must complete a 1,200 hour clinical internship before obtaining a diploma (Collins).

The only clinical internship offered in the State of Utah is located at Primary Children's Hospital in Salt Lake City. This is the only hospital in the State of Utah that hosts music therapists, with 5 therapists on staff (Intermountain Health Care). Luckily, there are 21 active music therapists in Utah carrying their own practice. However, some are not accepting new patients and only 8 of the 21 therapists specialize in Autism and Spectrum Disorders (Utah Association of Music Therapists). This illustrates hospitals and the general public are unaware of the influence music therapy has towards autism. Citizens tend to be afraid to accept music therapy because it seems unreliable and far-stretched. Due to the competitive and limited jobs in Utah, most therapists will leave the state to acquire jobs. With the deficit of therapists in the State of Utah, autistic children will not receive the help they desperately need. Utah's rates of autism are rapidly progressing with no definite solution. One must educate the public and medical institutions to demonstrate that the overarching problem of child autism can be aided through music therapy by improving ones communication and physical, emotional, and psychological state.

Music therapy encourages the patient to develop abilities and implicate them in other aspects of their lives. Each patient is given an individualized treatment plan that addresses their own needs unlike psychiatrists, psychologists, pediatric neurologists, or developmental pediatricians who offer generic treatments (American Music Therapy Association). To facilitate the creation of an individualized treatment plan, various approaches are used according to the age and previous diagnosis of the patient. Some examples of these approaches include Neurologic, Orff-Shulwerk, the Dalcroze Eurhythmics method, Nordoff-Robins, and the Kodaly method (Best Masters in Psychology). The Neurologic method uses research to treat the brain using music and percussion (Neurologic Music Therapy Services). The Orff-Shulwerk practice teaches children music by combining acting, singing, dancing, and the use of percussion instruments (Estrella). Dalcroze Eurhythmics technique "explores" musical concepts like meter, form, dynamics, phrase, tempo by means of movement, songs, ear training, improvisation, sight

singing, stories, and rhythm games (Kaufman Music Center). The Nordoff-Robins approach emphasizes the patient receiving therapy to participate in the production of music himself or herself (Best Masters in Psychology). The Kodaly method is the concept that music therapy is adaptable to different cultures (Tiszai). Therapists apply the principles of these methods or approaches in an attempt to individualize the treatment of each patient.

The senses such as auditory, visual, and tactile are all influenced by listening and making music. These senses can have a direct impact on one's physical, emotional, cognitive functioning, and increases neuroplasticity in the brain. Neuroplasticity is the capability of the brain to change or alter the ability to create different neural pathways to conform to changes within the brain. This can benefit patients who suffer from language cognitive and motor by using musical elements like rhythm and melody to promote brain recovery and trigger healthy brain areas.

Listening to or playing music increases dopamine production within the brain. Dopamine is a chemical released in the brain when the senses are stimulated. This satisfaction connected neurotransmitter is often known as a "motivation molecule." Music therapy is an effective treatment for individuals due to increasing dopamine production, aiding in improving mood, intensifying learning and focus, and furthering overall health (Innamorato).

Music affects the brain and other bodily functions in ways that are "observable, identifiable, measurable, and predictable," making it possible for fundamental therapeutic functions (Center for Music Therapy). Music therapy improves human capabilities through the calculated use of brain functioning. Music influences the brain in ways generic medicine can not. Its multi-sensory aspect aids patients to receive effective, individualized, research based therapy.

Generally autistic children have difficulties engaging emotionally. However, music therapy can train the brain to show and relate personal emotions with another human being. Research has shown there are results in joy, emotional synchronicity, and initiation of engagement occurring at almost the same time. This suggests children involved with music therapy are happier and able to express and share joyful emotions with the therapist as they are leading. These children presented additional initiatives when controlling the musical synergy then when the therapist dictated requests. This "spontaneous" engagement is scarce for children with autism, signifying the implication of music therapy is significant (Kim).

Communication and interactive behavior are encouraged by music. Music therapy is active communication with an "audience" that relieves some of the anxiety that comes through communicating with others. Autistic children have issues with communication. Some are unaware of common social mannerisms known to the general public. Others struggle keeping a conversation and/or have great anxiety doing so. Due to the interactive features and communicative aspect of music therapy, many children would be benefited.

A research study integrated a music therapy technique called developmental speech and language training through music. This technique was devised to incorporate suitable musical materials and involvement to strengthen speech and language development through musical instruments, singing, combining music, or movement (Janzen). Results showed both high and low functioning patients improved in "verbal production." This research provides evidence that music therapy aids high and low-functioning participants in improving valuable communication skills within society.

Children with autism are invited to engage in relationships through music therapy. The music provides connections, coherences, and context in which the autistic child can create a healthy relationship. The child does not need to connect to the therapist, rather can connect to the music between them. The music therapist proceeds at the rate of the patient, attempting to copy their motions and music. This helps the child experience interpersonal synchronization which aids metallization and management for enjoyable relations between one another.

If further engagement at home is made through music therapy, communication will increase causing the relationship to be more desirable and worth while.

An excellent way to ease tensions and mend family relationships affected by autism is to participate in family music therapy. This particular type of therapy assists the patient suffering from autism to establish or reestablish fundamental relationships. The therapist working from a system's perspective seeks to understand what, how, and when an incident occurs rather than why (Nemesh). Family music therapy benefits family communication skills, self-expression, and mending basic inequalities of ability within the family. Autistic children need to have support from loved ones and friends. They need to have someone they communicate well with and understands them as an individual. Family music therapy is a great way for the entire family to understand how the child feels and responds when positioned in a social setting.

There are many misconceptions about music therapy. Society often perceives that music therapy lacks medical research about its effectiveness. Others claim that music therapy is simply listening to music. Some say music therapists are just musicians who needed a day job. One way to educate the public about these misconceptions is to distribute music therapy materials to potential consumers and administrators in Utah to persuade them to incorporate music therapy. These materials could include letters, phone calls, visiting legislators, and supplying music therapy research to professional medical associations. Music therapy needs to be informed to other health and community associations so its benefits can be continually spread throughout the state of Utah.

The citizens of Utah have slowly accepted holistic approaches to health. However, it desperately needs to be expanded to deinstitutionalize music therapy and autism within the State of Utah. The future and survival of music therapy depends on taking effective positions in medical treatment and promoting health and wellbeing in the general public. In order to push music therapy forward, one must educate the mass population to promote its effectiveness.

Governmental planning from the State Legislature and the overall financial burden of autism has been addressed in the State of Utah. Powers of attorney, will, letter of intents, special needs trusts, benefit assessments, and guardianship are some of the few governmental topics discussed (Autism Society). However, there is no medical planning for autism in the future. Actions should be taken to implement Music therapy and autism should be treated together in more prominence in the State of Utah for the future. Child autism rates in Utah keep growing at a rapid rate. Music therapy can be implemented to aid the suffering these children endure. Music therapy should be treated with autism because its scientific research, foundation on emotions, communication skills, interpersonal responsiveness, and its aid towards families to communicate and establish better relationships with one another.