



MUSIC AS MEDICINE: A CASE STUDY IN AUTISM

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Janis Gruska, ND

Music touches us emotionally, where words alone can't.

(Johnny Depp)

Since time immemorial, music as a meaningful vibration has been infused into human culture to express feelings and evoke emotional release.¹ The concept of “sacred sounds” has been used since primeval times by indigenous cultures and ancient civilizations. It was believed to be capable of healing both the body and the soul. Although for a time in modern history, music was relegated to entertainment, and healing to medicine, since World War II the health benefits of music have become more recognized in mainstream medicine. In 1996, the World Health Organization recognized music as a form of healing therapy.

Music is rooted in the primitive brain structures that are involved in motivation, reward, and emotion. Review of neuromusical research reveals that the brain consists of a widely distributed neural system with locally specialized areas in the cognitive, affective, and motor regions.² More than any other stimulus, music has the ability to evoke images and feelings that may not necessarily be directly reflected in memory.

GLOBAL PREVALENCE OF ASD

Autism Spectrum Disorder (ASD) is a condition characterized by developmental delays, abnormal social skills, communication difficulties, learning disabilities, and behavioral problems. These issues can range from mild to severe in presentation.

Approximately 1% of the world population has ASD; the prevalence in the United States is estimated at 1 in 68 births.³ This exponential rise in the past 25 years has greatly impacted both the family unit and society at large.

CATHARSIS APPLICATION PROGRAM – CREATIVE THERAPY FOR ASD

The Catharsis Application Program (CAP) is an innovative therapeutic methodology based on receptive music induction associated with graphic expression. This process helps the client explore their emotions and feelings, utilizing music to trigger a cathartic phenomenon. The cathartic function of the music brings past traumatic experiences to the surface, thereby allowing the release of emotions. Graphic expression allows the individual to break through mental barriers without triggering the self-protective mechanism.

The Catharsis Application Program is a 12-session process, unfolding over a 3-month period in 1-hour weekly contact sessions. Each session is implemented with well-defined conditions and therapeutic character to maximize the healing effect of the music.

Using CAP as an artistic mediation gives each individual the opportunity to be an active participant in their own progression toward change. The therapeutic program mobilizing one's emotional resilience always leads to behavioral changes. It enhances social skills, the capacity of verbal expression, improves the mood, stimulates the memory, and creates new spatial-temporal patterns.

UTILIZING CAP IN AUTISM – A CASE STUDY

Daniel is a 7-year-old boy who was diagnosed with kidney failure 2 weeks following a premature delivery. His condition required extensive medical intervention including dialysis. As a result of his condition, he experienced developmental delays, leading to the diagnosis of attention-deficit hyperactivity disorder (ADHD) and autism. He lacked bowel control at this time.

Daniel was being seen by a speech pathologist at the Integrated Therapy Solutions (ITS) in Los Angeles, CA. His family was introduced to CAP as an adjunctive therapeutic intervention to the speech therapy. After consent was given to participate in the program, a 13-week schedule was established.

CAP SCHEDULE

For Daniel, the program consisted of the following activities:

- **Week 1:** Initial speech and language assessment
- **Week 2:** Initial CAP session without music. This first reference drawing without music (Figure 1), will serve as a basis for comparison during the final evaluation.
- **Week 3 to 12:** Ten music sessions with graphic expression
- **Week 13:** Final CAP session without music. The final reference drawing (Figure 5) was performed with the same criteria as in the initial evaluation. It serves as a basis for comparison during the final evaluation.

Participants use specific drawing materials selected for the program. Each musical selection has an archetypal theme selected in a predetermined sequence during the program. Assessments of the drawings are conducted within the context of the series, as well as individually.

The following 5 drawings (Figures 1-5) have been selected to illustrate the transitions which took place during Daniel's program.



Figure 1. First Drawing, Without Music

Daniel used a lot of water to express his unhappiness and his unhealthy emotions. The type of lines expressed in the drawing displays much anger and aggressiveness as if he was using the paper to externalize all his repressed feelings. His mother did not believe that he would be able to hold a pencil, but what we observe is Daniel using all his energy to completely fill the space. There is a lot of black and brown color that reveals his insecurity. The colors green, yellow, and orange are crossed with black or brown as if he was announcing a possible path of release and liberation covered by anxiety and fears.



Figure 2. Drawing from the 7th Music Session

This is a very important session for Daniel. The theme of this music is liberation of old patterns and alleviating the burden of unhealthy behaviors. The music helps one to feel in control and gives one the courage to leave what must be abandoned in order to find relief in the simple joys of life. The structure of the drawing suggests that Daniel is reconnecting to his healthy emotions: we have several heart shapes here, of which the big red one contains 1 green and 2 blue hearts.



Figure 3. Drawing from the 9th Music Session

This music helps us to no longer be afraid of suffering, to feel that life is still here and full of love. This is the first drawing where we can really identify the forms of animals. The sun is present and we see great circles in front of each animal as if they were put there to feed everyone. It is as if Daniel takes care of his "inner inhabitants." He helps each one to grow. He wrote his name in black in the upper left of the sheet, showing that he is cognizant of the process.

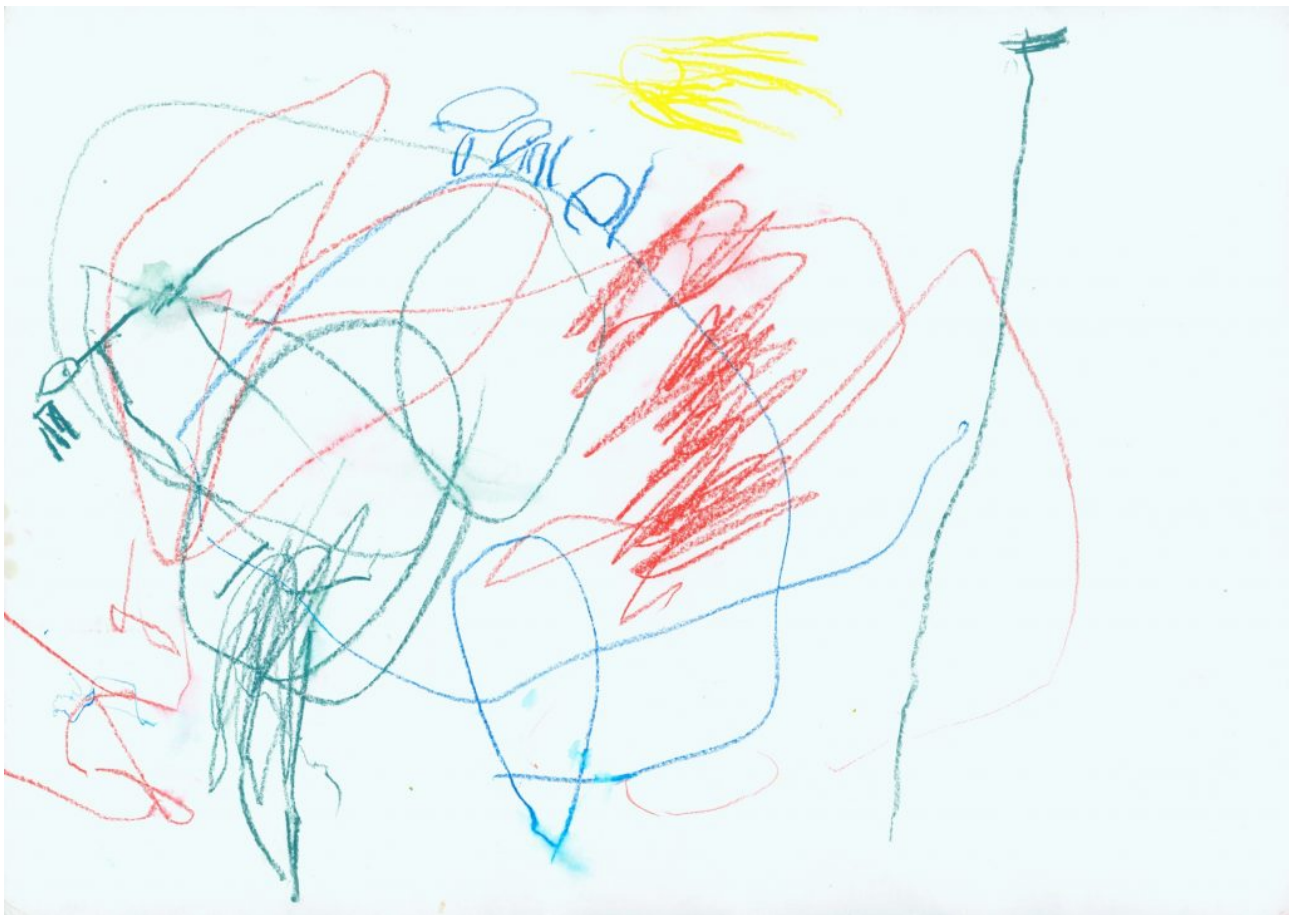


Figure 4. Drawing from the 10th Music Session

The theme of this music refers to the growing confidence in the Universal Creative Movement, which brings our miseries into an evolving spiral, to transform them into the rocks that are the foundations of life. The drawing is separated into 2 parts by a line which is dark green. To the right of this line, nothing is drawn. It is like a new space, for a brand new story to begin for him. Daniel is now more connected to life. The colors brown and black are no longer displayed in this drawing. We have green, blue, yellow, and red. He wrote his name in blue. In the middle of the sheet is a red abstract image. He identifies an area of anger that needs to be seen; the sun is above this red aggressive pattern. There are many rays projecting from the sun, turned towards the right, the future. The speech therapist notes that unlike previously, he is able to go the bathroom when he is asked to do so.



Figure 5. Final Drawing, Without Music

This drawing has exactly the same structure as the previous one, but with these important changes: 1) The line that separates the drawing vertically into 2 parts is now light green; 2) The right side is larger and it is no longer empty; 3) The sun is now placed on the right, and for the first time the rays of the sun extend to both the right and the left; 4) The central round shape is clearly identified as a prehistoric animal. We can see very clearly his paws, his eyes turned towards the future, the ridge of his back. It looks like a Stegosaurus. Archeologists believe that the bony plates evolved for protection and that this animal turned red to defend itself from predators. We see here the red color covering the animal, as if Daniel had now found sufficient defense mechanisms to cope with the things that he feared. He now invests in the right side of the sheet, that is to say the future. The blue and color forms on the right of the sheet show that something has reshaped in himself (blue is a masculine color).

CLINICAL OBSERVATIONS

Initially, without music, we see Daniel express anger and aggressiveness. His use of space reveals the externalization of repressed feelings, while the predominance of dark colors reveals his insecurity cloaked by anxiety and fears. As the musical sessions progress, we observe through his drawings that he begins to release anxiety and to reconnect to healthy emotions.

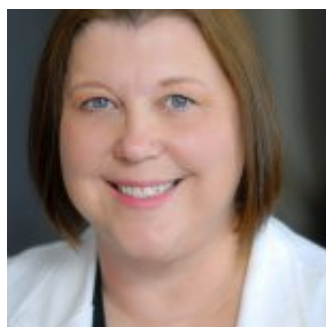
Daniel was initially very resistant to trying anything new. He preferred to stay at home and isolate himself. He was in 1st grade prior to the CAP program. He was mostly interested in picture books (intended for kindergarten-aged children). He would be resistant and struggled with any mathematical operation. He was very against trying to eat food through his mouth, which required nourishment to be delivered through a gastric tube. If food was placed in his mouth, he would spit it out immediately. He was frightened of animals and toys that made sounds. His pictures at the outset of CAP were predominantly 1 tone, 1 color, and fairly simple.

Following the program, Daniel gradually became more open and more responsive to the idea of going to new places and even trying new experiences. There was an increased desire to play with others. He was willing to play with toys that made sounds. Daniel expressed desire for his family to color together, and would insist that they do that as a group activity. He became more adaptive to experiencing new foods. He was eating more, which in turn accelerated his growth. While drawing, he gradually began utilizing many more colors and was freer in terms of expressing himself on paper. He was more excited and a lot happier to color and draw at home. At school his reading improved, and although he was still challenged with mathematical operations, he was less resistant to them. He transitioned to mainstream classes in the 2nd grade. His enjoyment of music grew over time, which prompted his enrollment in piano lessons by the time he was in 3rd grade. Although there were periods of regression, Daniel continued to improve, and eventually was transitioned into a normal classroom setting.

CAP IN THE NATUROPATHIC MEDICAL PRACTICE

We have examined how the music and expressive drawing experienced in the Catharsis Application Program can have a positive influence on emotions and behaviors. Children with autism spectrum disorder often find it hard to recognize and control their emotions. Interventions that can help them improve their emotional development can in turn help them understand and respond to others appropriately. Subsequently, the ability to engage in social activities, as well as quality of life, is enhanced. Additionally, the reduction of aberrant social behaviors and conduct problems relieves the stress often experienced by parents and caregivers.

Often, children do not have the language skill or depth of understanding required to express their pain. Music and drawings serve as an intermediate language between patient and practitioner, creating a relationship of communication through the expression of emotions in a non-verbal manner. The use of this innovative mind-body technique respects the principles of naturopathic medicine and is easily incorporated into practice either with individuals or in a group. It has been my experience that by embracing a therapy which is transformative and effortless in its application is not only a gift for your young patients, but for their families as well.



Janis Gruska, ND, is a 1991 graduate of the National College of Naturopathic Medicine and is licensed in the State of California. Her medical practice focuses on the treatment of mental health conditions, utilizing therapeutics which support positive change through life transitions. She has been a medical consultant for the Catharsis Application Program since 2009. Dr Gruska is trained as a professional facilitator by the founders of the Catharsis Technique, and continues to be instrumental in introducing the program to medical and mental health professional in the United States.

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