

Therapeutic Function of Music Plan Worksheet

Problem Statement: In typically developing children, being able to use academic skills is important for use in school and getting into kindergarten. Children with autism commonly experience difficulties with pre-academic skills that cause them to fall behind their peers. The structure of music can help retain information related to colors, numbers, and letters. (problem statement has been revised since the original statement wasn't clear toward the academic goal)

Musical Element:	Theoretical Framework:	Purpose of musical element:	Explicit description of the musical element:
Timbre	Brain has memory storage for timbres (Schulze,2013)	Use timbre to aid in memory	Use timbre for discriminating objective such as using guitar for letters and piano for numbers
Rhythm	Rhythm creates anticipation and predictability. (Thaut, 2005)	Creating structure will help client be more successful	Repeat rhythmic patterns to give structure for cueing a certain behavior
Tempo	Increase speed is correlated with decreased off-task behavior and decreased incorrect responses (Thaut, 2005)	Using a moderate will maintain attention	When wanting to facilitate engagement, vary the tempo
Pitch	Children with autism retain good pitch memory. Researchers experimented with associating a pitch with an animal and children with ASD showed significantly more correct answers than others (Heaton, 2003)	Associating an animal with a pitch will help with memory of that animal	Associate each item with a certain pitch (ex: D4 for dog, F# for pig, and A
Pitch 2	Children with autism have very good pitch discrimination for small intervals (Heaton, 2005). Children with autism also have very good pitch and melody memory (Burack, 2014)	Clients have good pitch discrimination and memory will aid in retaining the melody of a song	When writing songs, remember that children ASD have good pitch memory. Making song more simple will help with memory
Melody	Melody plays a bigger role in song recognition than text. (Ishii, 2009)	Piggy-backing songs could hinder clients' ability to recall information	When singing song for intervention, write a new song to avoid

			conflicting associations
Dynamics	Sound that is suddenly louder caused child to become startled. This is important to consider when working when children with autism who have auditory hypersensitivity (Lucker, 2013)	Starting softer and get louder as opposed to suddenly getting louder will reduce likelihood of startle reflex	When wanting to change the dynamics in a song, gradually get louder about opposed to jumping right into the heavy strums on guitar. Start with finger plucking
Lyrics	Spoken words, vocalise, and sung words are processed in the same region of the brain to different degrees (Anton, et al 2010)	Singing a syllable or letter or word will activate region of the brain that processes speech	After learning a letter, have clients sing letter with the same melody
Form	Children with autism prefer to have structure to a song to be more predictable (Oldfield & Janjua, 2006)	When composing, use songs that have a repetitive form to be more predictable.	When song writing, write melodies that repeat and are structure the same way.
Harmony	Level of complexity in the songs played changed the children's joint attention Simple music caused better joint attention in children with severe ASD Complex music caused better joint attention in children with mild ASD (Kalas, 2012)	Matching complexity of song to clients' spectrum will facilitate more engagement	Create songs that match the clients' abilities while still being able to engage the other clients.
Style	Music is client-preferred to promote attention and engagement	Having preferred music will facilitate the clients' engagement in a task.	When singing songs or composing songs, create them by piggy backing or using similar elements to preferred songs

Theory-based Synthesis of the Music: Comprehensive description of the characteristics of the musical elements; gives meaning to music as a “whole” to be implemented in intervention strategies.

A therapist can use the enhanced musical abilities that children with autism commonly have to create interventions. Since children with autism have great pitch discrimination and memory, a therapist can use mnemonics or other forms to help the client retain the information. The research shows that a song is better recalled if the melody is heard rather than the text. To avoid conflict of memory for text, it would be best to write original songs for interventions. In order to remember the lyrics, the melody needs to be repeated several times. Research also shows that sung words, vocalise, and speech are processed in same region of the brain (middle and superior temporal gyrus). When singing about the alphabet, for example, after identifying the letter, sing the letter with the original melody to better retain the letter. As for the structure of the song, it needs to be

short and the melody repeated often. The complexity of the melody relates to the clients' functioning. The tempo should be upbeat to facilitate engaging, but slow enough for clients to comprehend the text.

References

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