

Music in therapy

By Leticia Hodson

To enjoy music is to be human. Every culture and civilisation on earth has used music to connect, converse and archive their histories.

But how much of a role does music play in childhood development and can we use music to learn new skills? Children with Down syndrome can have delays in areas such as gross and fine motor skills as well as speech, language and motor planning. Regular therapy with allied health specialists can help children gain strength and confidence in these areas but what about music therapy?

Music therapy is defined by the Australian Music Therapy Association as ‘the intentional use of music by a university trained professional who is registered with the Australian Music Therapy Association Inc. Registered music therapists draw on an extensive body of research and are bound by a code of ethics that informs their practice.’

Helen Cameron is a registered music therapist who has been running her music therapy classes JAM Music for the past 21 years in Melbourne. I spoke with her about the benefits of music for young children and how music can create long term connections for people with limited language and complex disabilities. Helen says:

Music is a language that doesn't need to use words. It's an early form of communication and comes from a need to express ourselves emotionally.

When we look back in early records of the use of music in western civilisation, we had the town criers who would go around and sing the daily news. That's how people remembered the information, through music, and Aboriginal cultures have song lines where they would sing their histories as well. Through the song we retain the memory much better partly because we enjoy the sound, and then we repeat it so that reinforces that whole memory.

When you have a child with Down syndrome, it can be easy to fall into ‘Therapy World’ where development can be reduced to standardised measures of milestones and improvement, but sometimes it's important to remember that fun activities can have strong roots in physical,



cognitive and emotional development too. When you lose yourself in music, you use so many different brain functions at the same time including gross and fine motor skills, speech and language skills, memory and motor planning skills as well as a generous helping of sensory input and mental health maintenance.

Helen says that we connect to music in an innate way partly because of the *form* of music.

Music is organised sound and what endures is when that organisation is really satisfying – when there's repetition and that's what we call 'form'. A song form will have a chorus and while you might not know the verse, you know that chorus when it returns, and that is satisfying.

I can see this with nursery rhymes and songs that have been passed down from parents to children across centuries. I remember singing *Twinkle Twinkle Little Star* to my son who has Down syndrome when he was very young. I could see that he was communicating with me when he copied the actions and later began to build language by remembering the rhymes.

Helen says that this is where music therapy can come in by increasing the capacity of children in a gradual way and encouraging them to get involved to get that sense of success:

If the child is needing to improve their communication but they're not making any sounds as yet, [you can] choose from pictures and get familiar with the songs. Then they can start filling in a word, to filling in two words or filling in that word more often. If they know the whole song, you can pause for longer so that the expectation gradually creeps up. Because they are motivated and enjoying it, they don't see it as chore but more of a game. And of course, we know that playing is the crucial element for children.



Music therapy can be divided into two broad streams: active and receptive. Active therapy is when the person is actively involved in producing the sounds of the music through either voice or instruments. Receptive therapy is when the person is consuming the music for relaxation, mental health or self-regulation. There are also benefits of music to people with dementia. Music that has been important in our lives stays with us in our brains in the same place memories are stored. This means memories of people and events can be recalled by listening to a familiar piece of music.

Helen says there is a place for both types but when you look at MRI scans of people while they are actively playing music, the motor cortex is engaged so there are more areas of the brain working at the same time¹. This is specifically interesting for children with Down syndrome, Helen explains to me, as the low muscle tone can be activated through the music. There is a sensory processing element to feeling the body produce sound and feeling that sound through the body.



The benefits of music therapy can come just as strongly from the development of the relationship between the practitioner and the participant. Helen describes how creating music with people who have complex disabilities and limited language can provide a window into the person's cognitive abilities:

Non-verbal interaction can give people with complex disabilities a strong sense of connection. They can also show what their cognitive skills are and show that they understand a piece of music by knowing where to come in. We often underestimate the abilities of people with disabilities and through the music you can show that comprehension.

Music therapy is a relatively safe and low-risk activity however professional therapists will closely monitor client responses to ensure the therapy is effective as well as working alongside allied health professionals. Helen explains:

A lot of their work is really technical, they know a lot about the body, and what will damage the body if you move it in the wrong way depending on what that person's needs are. So, physios are really important but so are the OTs because they have that specialised knowledge of what kind of sensory input is going to be beneficial for that person. We also work with speech therapists to determine areas of speech to work on and what type of augmentative assisted communication device (AAC) to use.

Music and the desire to communicate is innate. Belting out a rendition of your favourite song is also a fun way to build new skills!

Leticia Hodson is the Managing Editor of Voice and mum to a seven year old with Down syndrome (who turns every day into musical theatre).

Helen Cameron is a Registered Music Therapist and owner of JAM Music. More info here <https://www.jammusictherapy.com/>

¹ Wollman I., et al. (2018). Neural network returning and neural predictors of learning success associated with cello training, *Proc Natl Acad Sci USA*. Jun 26;115(26):E6056-E6064. doi: 10.1073/pnas.1721414115.

