The Benefits of Musical Activities on Facilitating Auditory Memory in Children Under Three who are Deaf or Hard of Hearing

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Auditory Memory

Auditory memory is the ability to take in information that is delivered orally, process it, remember it, and recall it.

Children who are deaf or hard of hearing have increased difficulty with auditory memory than their typically hearing peers (Torppa et al., 2014).

The components that lead to information being stored in the auditory memory are:

- sustained attention
- repetition
- rhythm (Thiessen & Saffran, 2009).

Neurological Impact

Pruning can occur in the auditory cortex due to lack/reduced auditory input.

- Vibration and touch can activate the primary auditory cortex.
- Singing and listening to music releases endorphins and dopamine, which increases brain plasticity.
- Musical activities engage sensory, cognitive, and reward networks of the brain, which increases memory.

Strategies

ONE person singing at a time

NO background instrumentals

ONE verse at a time

Songs with a repetitive rhythm/lyrics

Pair songs with routines/daily activities

Change the lyrics to target vocabulary

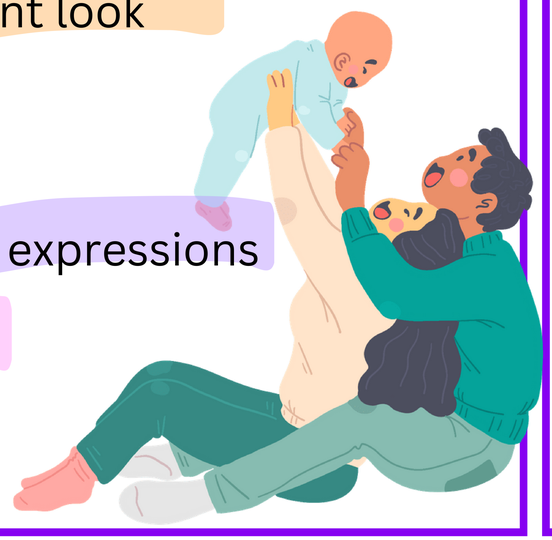
Add movements with words/move to the rhythm

Animated in facial expressions and movements

Add wait time/expectant look

Positioning

- Clear view of facial expressions
- Close proximity
- Face to face



> All studies showing significant results show improvements of musical skills, music or speech perception or cognitive aspects with musical activities; none of them report negative effects. Music may have positive consequences for the lives of children with hearing impairments. From an ethical point of view, it is not wise to exclude them from musical activities at home or outside of the home (Torppa et al, 2019, pp 118).

Why Music?

Rhythm

Acts as a framework that allows the brain to form predictions of future input and aids temporal sequencing and segmentation.

Repetition

Repeating information aloud can help to reinforce auditory memory.

Sustained Attention

Melody facilitates learning by attracting, maintaining and enhancing attention.

Multi-sensory

Perception such as the tactile, visual, or kinesthetic areas can be developed and compensate for the missing or reduced auditory input.

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