Music-based Interventions for Adults with Aphasia

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AIM

Investigate the current state of the literature regarding the use of music-based interventions by speech-language pathologists to improve communication in adults with aphasia.

METHODS

Integrative literature review on PubMed and CINHAL (n=276)

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Abstract/title review (n=53)

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Full-text manuscript review (n=32)

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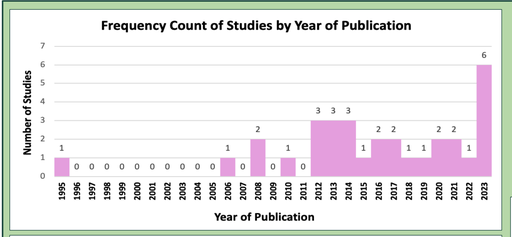
Data extraction

Inclusion Criteria:
- Published in English
- Contains a title and an abstract
- Must be a peer-reviewed publication

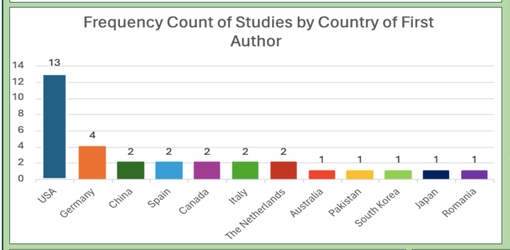
Exclusion criteria:
- Only child participants
- Non-music-based interventions
- Non-communication-focused outcomes
- Non-experimental study

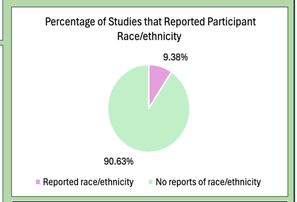
Data Extraction Completed in Covidence
- Country of the first author
- Year of publication
- Type of study
- Race/ethnicity
- Male and female ratio
- Musical background
- Presence of AOS
- Etiology of aphasia
- Type of aphasia
- Outcome measures
- Type of intervention

RESULTS

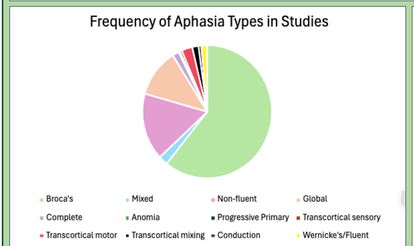


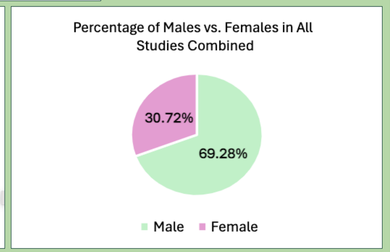
More Data

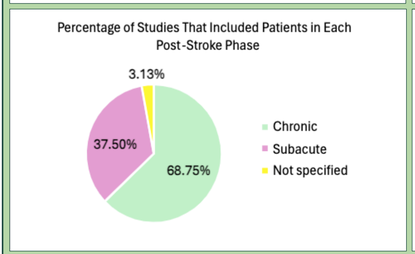


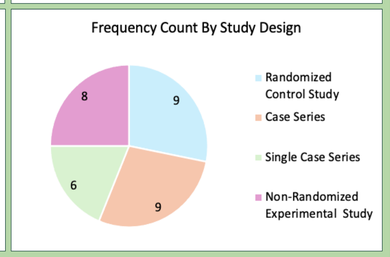


Total # of Participants: 564









# of studies	Intervention	Improved Communication	Mixed Results
17	MIT or MMIT	64.71%	35.29%
4	Rhythmic Speech Cueing	25.00%	75.00%
4	Therapeutic Singing	25.00%	75.00%
2	Group Choir	50.00%	50.00%
2	SIPARI	0.00%	100.00%
1	Speech and Music Therapy	100.00%	0.00%
1	Musical Speech Stimulation	100.00%	0.00%
1	Therapeutic Song Writing	100.00%	0.00%
1	Symbolic Communication Training Through Music	100.00%	0.00%

MUSIC-BASED INTERVENTIONS

- **Melodic Intonation Therapy**: A therapy consisting of three levels with increasing complexity. The patient learns a set of functional phrases by intonating the syllables with two tones while simultaneously tapping their left hand to the rhythm (Piccolo, 2023).
- **Rhythmic Speech Cueing**: Utilization of metric/patterned rhythmic cues to control speech rate and facilitate initiation of speech. Appropriate for clients with apraxia, dysarthria, and fluency disorders (Piccolo, 2023).
- **Therapeutic Singing**: Singing activities to practice speech articulation and improve respiratory function. This technique is appropriate for patients with apraxia, dysarthria, and medical conditions (Piccolo, 2023).
- **Group Choir**: A social activity comprising of various vocal exercises including diaphragmatic breathing, simple vocal improvisations, and harmonization. Members of the choir are involved in the selection of the repertoire (Tamplin, 2013).
- **Rhythmic-melodic Voice Therapy (SIPARI): F**ocuses on encouraging self-initiated planning and sequencing performance through six components (singing, intonation, prosody, breathing, rhythm, and improvisation). Focusing initially on melodic speech components, a stepwise change to temporal-rhythmic speech components is carried out to stimulate the phonological and segmental capabilities of the left hemisphere (Jungblunt, 2014).
- **Speech-Music Therapy:** A therapeutic approach combining elements of speech therapy and all musical elements of music therapy simultaneously (Hurkmans, 2015).
- **Musical Speech Stimulation:** Utilization of musical materials (such as songs, rhymes, and chants) to stimulate non-propositional speech (Piccolo, 2023).
- **Therapeutic Song Writing:** (1) Song parody technique: replace words in a familiar song with her own words and thoughts (2) Modified song collage technique: selecting words and phrases from existing songs that have personal meaning and significance and mapping them onto an original melody (Mantie-Kozlowski, 2020).

CONCLUSIONS

- Many therapeutic interventions involving musical elements have encouraging results in improving communication for individuals with aphasia.
- Musical therapies such as therapeutic songwriting and group singing create motivating environments.
- Many modified versions of MIT are practiced by clinicians. These versions include MIT without left-hand tapping, MIT with longer phrases, and MIT with unfamiliar tones and intervals. In addition to this, MIT has been adapted to many different languages. These include but are not limited to, Spanish, Arabic, and Romanian.
- There is a large debate about whether it is rhythm or melody that is efficient in aiding speech rehabilitation.

Sources