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Basic and Translational Research

Musical training and development of auditory skills in early childhood: A systematic review

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Abstract

This study is a systematic review that analyzed the different types of music training that contribute to the development of auditory skills in normal hearing children. Searches were conducted in the following databases and registers: CENTRAL, PubMed, EMBASE, CINHAL, Web of Science, Science Direct, LILACS, Scopus, ClinicalTrials.gov, WHO-ICTRP, and grey literature, including all languages and without publication year filter, using the following DeCS (Health Sciences Descriptors): Music OR Music Therapy AND Hearing OR Auditory OR Evoked Potentials AND (Child OR Infants OR Childhood OR Preschool). Out of 664 identified studies, 17 were fully analyzed, and six met the inclusion criteria. Studies primarily focused on auditory skills and the types of musical training varied between types of musical learning, as music classes and activities in the clinical context focusing on sound parameters discrimination, such as pitch, frequency, duration and timbre, and musical elements like melody, harmony, and rhythm. The studies have demonstrated that music training based on the musical learning process, regardless of educational or clinical context, has contributed to the development of auditory skills in hearing children during early childhood.

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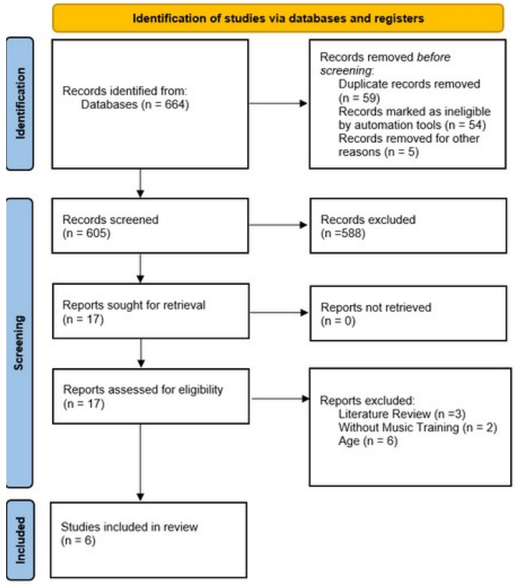
Objectifs

To search, evaluate, and synthesize through a systematic review, the different types of music training that contribute to the development of auditory skills in normal hearing children, up to six years old, during early childhood.

Méthodes et Matériels

- Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and registration number: CRD42024557330/PROSPERO;
- Search strategy conducted up to March 2024 using PICOS strategy were applied to answer the research question: "What types of music training contribute to the development of auditory skills in typically developing children during early childhood?"

Résultats



- The six studies employed an experimental design.
- Only one study conducted a randomized clinical trial, and none implemented blinding in the intervention arms.
- Evaluation measures of auditory skills and electrophysiological measures of hearing were used.
- The types of musical training varied between types of musical learning, in different contexts (Clinical or Educational).
- The studies aimed to investigate the relationship between musical training and linguistic skills such as tonal and rhythmic discrimination, speech perception in noise, and neural processing of temporal structure in speech.

Conclusion

The studies demonstrated that music training based on the musical learning process, regardless of educational or clinical context, has contributed to the development of auditory skills in hearing children during early childhood. However, the scientific production on the field is limited, with a notable shortage of studies with a high level of scientific evidence.

Références

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