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# Music and Sound-Based Intervention in Autism Spectrum Disorder: A Scoping Review

#### **Abstract**

To map the evidence from the relevant studies regarding the use of music and sound-based intervention for autism spectrum disorder (ASD) using a scoping review study design. Scoping review was conducted according to the inclusion criteria using Google Scholar, PubMed, CINAHL, MEDLINE, and Scopus. The review was accomplished in five steps: 1) identify the inclusion criteria, 2) search for relevant studies, 3) studies selection, 4) data extraction and charting, and 5) data analysis and presentation. Four major themes emerged from 39 studies that matched the inclusion criteria as follows: 1) forms of sound therapy discussing methods of sound therapy and stimulus used, 2) duration of the intervention explain in terms of listening time and total listening sessions, 3) clinical characteristics of the intervention exploring the main interest of sound therapy study in ASD, and 4) evidence for the intervention effectiveness looking into the positive, negative, and mixed findings of previous studies. Each theme was explored to identify the knowledge gaps in sound-inter-vention therapy. This review demonstrated the need for further studies to address several issues including identifying the effectiveness of sound-therapy intervention for ASD according to the individual sound types, the minimum duration for ASD sound-therapy intervention and more details on the use of technology, and clinical features of the sound-therapy intervention. These elements are important to further demonstrate the effectiveness of sound therapy intervention for ASD children. Psychiatry Investig 2022;19(8):626-636. © 2022.

## Author keywords

Acoustic stimulation; Autism; Autism spectrum disorder; Autistic disorder; Early medical intervention; Music therapy

# Indexed keywords

## **EMTREE** medical terms

Article; auditory stimulation; autism; behavior; cognition; communication disorder; data analysis; data extraction; early intervention; education; electrophysiology; human; listening effort; music; music therapy; outcome assessment; sleep quality; social cognition; social interaction; sound; speech; stimulus; thematic analysis

## Funding details

Details about financial support for research, including funding sources and grant numbers as provided in academic publications.

Funding sponsor Funding number Acronym

Ministry of Higher Education, Malaysia

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This research was funded by Transdisciplinary Research Grant Scheme (TRGS) (TRGS/1/2019/UIAM/02/4/2) from the Ministry of Higher Education (MoHE) of Malaysia.

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Author keywords

Indexed keywords

Funding details

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