Musical Stimming in Autistic Adults

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Background

- Music is a common tool for emotion regulation *(e.g. DeNora, 2000; Juslin & Laukka, 2004; Marik & Stegmann, 2016; Randall et al., 2014; Saarikallio, 2011).*
- Within the autistic community, the repetitive actions known as stimming serve emotion regulation functions *(e.g. Collis et al., 2022; Kapp et al., 2019; Manor-Binyamini & Schreiber-Divon, 2019).*
- Because music and stimming have similar regulatory effects, and because repetition is fundamental to both, there is potential for interaction and intersection.

Purpose

Explore relationships between music, stimming, and emotion regulation within autistic adults.

Method

- Design: Instrumental case study *(Stake, 2006)*
- Participants: Four autistic adults with diverse gender, race/ethnicity, ability, and forms of music engagement, who self-identified as using music for stimming purposes
- Data Sources: Interviews, reflective journaling, social media posts
- Data Analysis: Thematic analysis *(Saldaña, 2021; Stake, 2006)*

Selected References

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Manor-Binyamini, I. & Schreiber-Divon, M. (2019). Repetitive behaviors: Listening to the voice of people with high-functioning autism spectrum disorder. *Research in Autism Spectrum Disorders*, *64*, 23–30. https://doi.org/10.1016/j.rasd.2019.04.001

Findings

Theme 1: Stimming Is Essential to Mental Health

- Defining Stimming: Repetitive actions that create the sensory and emotional balance necessary for wellbeing
- Role in Mental Health: "This is fun… but it's not *for* fun. It's *for* survival" *(Alex, Interview 1)*.
- Social Pressure to "Mask: "I don't do it outside of the home because it probably looks weird and I dislike being asked questions about how I move or position my own body" *(June, Interview 1)*.

Theme 2: Musical Stimming Includes Both Motor and Auditory Repetition

- Moving to Music while listening, performing, or composing
  - Jumping, flapping, running, rocking, tapping, bouncing, swaying, dancing, etc.
  - Movement quality affected by culture, proprioception, and relationship to musical beat
- Repeating Music including full songs, sections, or phrases while listening and/or performing
  - Choice of material influenced by individual preferences for musical features, lyrics content, connection to special interests, and physical sensations
  - Duration of repetition: Minutes, hours, days, weeks, or months

Theme 3: Emotion Regulation Through Intertwined Sensory and Cognitive Processes

- Musical Stimming simultaneously modulated cognitive feelings and sensory experience/emotions.
  - Directing Attention & Blocking Noise, e.g. focusing and avoiding sensory overload in noisy environments
  - Changing Mood & Releasing Energy, e.g. uplifting mood while reducing physical stress
  - Expressing Feelings & Enjoying Auditory Stimulation
    - "It's a great way for people that know me to know how I feel, or sometimes even guess what I want or need" *(Lucas, Social Media Post)*.
    - "Stimming while listening to music is my favorite feeling in the whole world…. When I put my headphones on, play my stimming songs on repeat and run around jumping up and down and moving my arms, that is a feeling I couldn't describe if I tried" *(Olivia, Social Media Post)*.

Conclusions

- Musical stimming consists of repetitive motor or auditory actions during engagement with music through listening, performing, and/or composing, which contribute to emotion regulation through simultaneous sensory and cognitive processes.
- The emotional processes appear to be nominally similar to general self-regulatory usage of music.
- The defining features appear to be extensive repetition and focus on music as sensory input.
- The apparent role of repetition in the emotion regulation functions of musical stimming warrants further comparative and neuropsychological investigation. This could reveal new insights about both autism and music cognition.