

## AIM

To find if there are any **personal preferences** in music among autistic children of Indian origin and explore if **musical preferences are modulated by familiarity**.

## INTRODUCTION

Autism spectrum disorder (ASD) describes group of neurodevelopmental disorders. Signs typically appear during early childhood. It includes problems with speech and nonverbal communication, repetitive behaviours and many more.

Music is a structured way to present information. Melodic and rhythmic patterns help autistic individuals in making social and family connections through a mutual interest, repetitive learning tasks, providing a multi sensory approach that taps into auditory, visual and kinaesthetic learning.

## METHOD

Caregivers of five children (4-8 yrs.; 4 boys) of the **mild and severe** ends of the autism spectrum were interviewed to acquire the child's music listening habits, preferences and influence on their behaviour thereon.

Subsequently, a playlist comprising of familiar and unfamiliar music for each child was curated based on the interviews. While playing each song, categorical liking responses (Like, Neutral, Dislike) per stimulus were recorded.

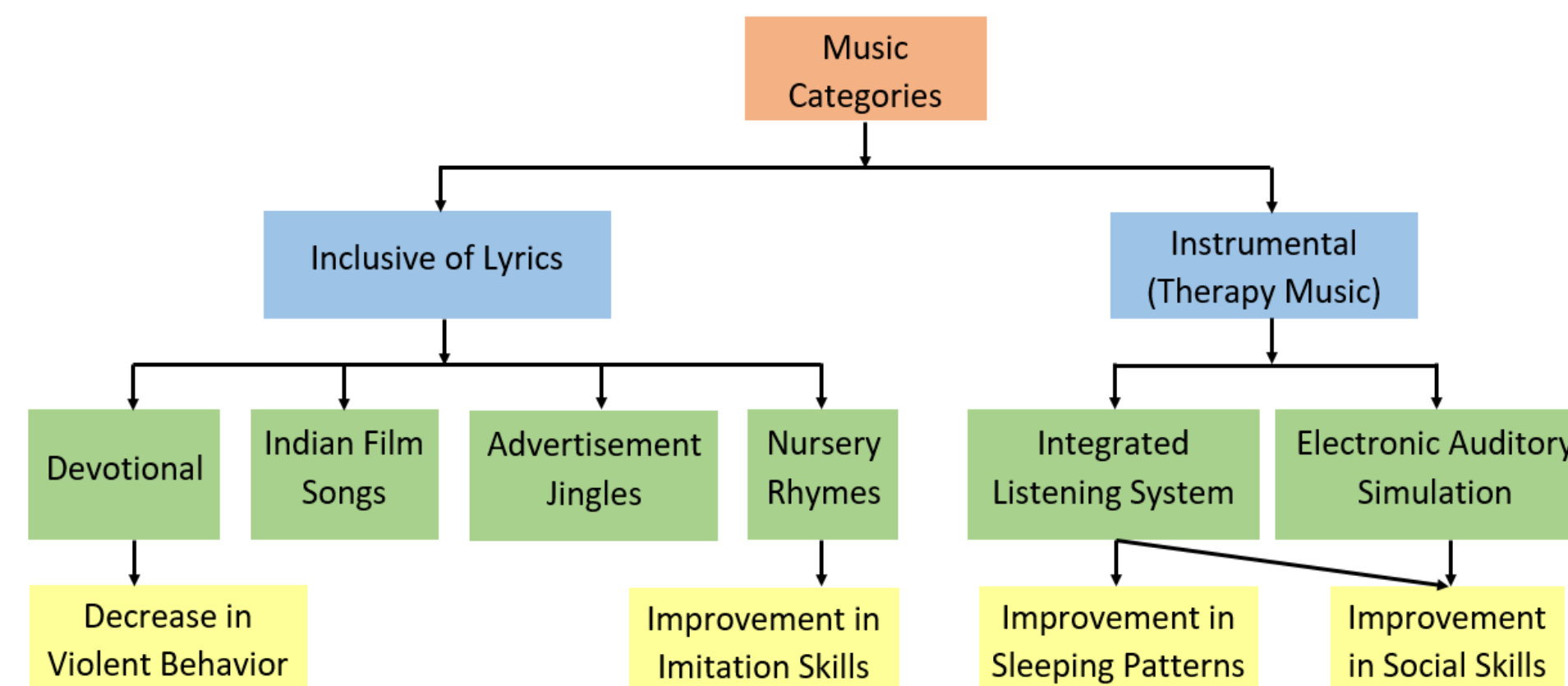


Fig 1: Music Genres and its Behavioral Effects

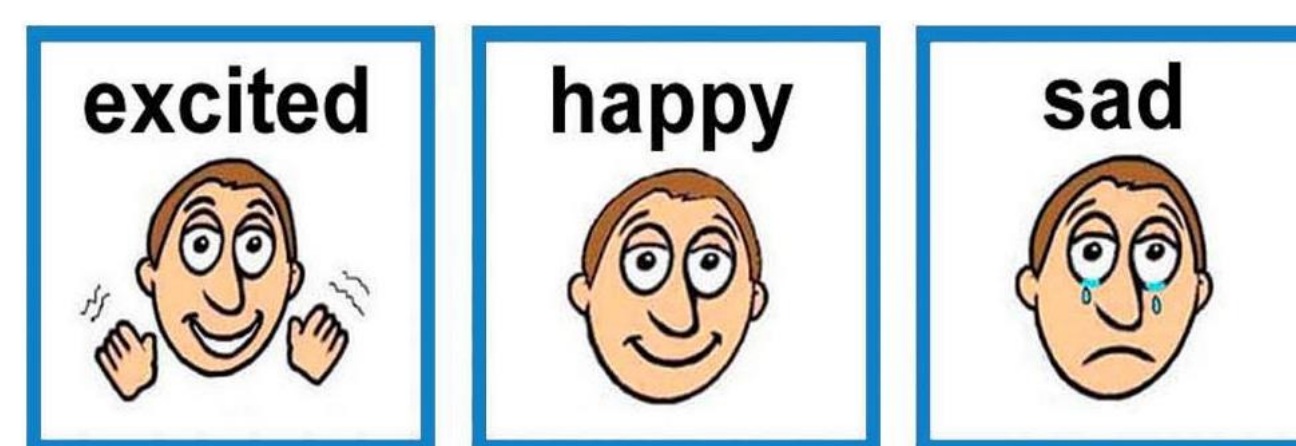


Fig 2: Emotion Flash Cards used in Study



Fig 3: Sample of Emotion Measure (From left to right: Neutral, Like, Dislike)

## RESULTS

Four children preferred a mix of music with emotional depth (soft and gentle attributes) that may increase cognitive empathy among autistic kids. **Binomial sign test** for statistical analysis, revealed no significant differences as a result of familiarity.

**Like : Success (N = 5) = 1, p = 0.19**  
**Neutral : Success (N = 3) = 0, p = 0.12**  
**Dislike : Success (N = 3) = 1, p = 0.50**

Subject ID	Familiar			Unfamiliar		
	Like	Neutral	Dislike	Like	Neutral	Dislike
1	3	1	1	2	2	1
2	3	2	0	1	3	1
3	2	3	0	1	3	1
4	1	3	1	2	3	0
5	2	3	0	1	4	0

Table 1: Categorical liking of familiar and unfamiliar songs

## FUTURE DIRECTION

The study provides an initial support that music of emotional depth may increase cognitive empathy, as demonstrated by behavioural changes among autistic children. This concludes that early intervention of music, categorized as high on emotional quotient (EQ) have long term implications on behaviour. Extension of this approach to a larger sample, controlled age-wise and severity-wise will potentially help in generating a playlist.

## BIBLIOGRAPHY

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- [2] Greenberg D. M., Rentfrow P. J., & Baron-Cohen S., **"Can Music Increase Empathy? Interpreting musical experience through the Empathizing-Systemizing (E-S) theory: Implications for autism,"** *Empirical Musicology Review*, 10(1), 79–94.