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# Comparing Three Music Therapy Interventions for Anxiety and Relaxation in Youth With Amplified Pain

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## Introduction

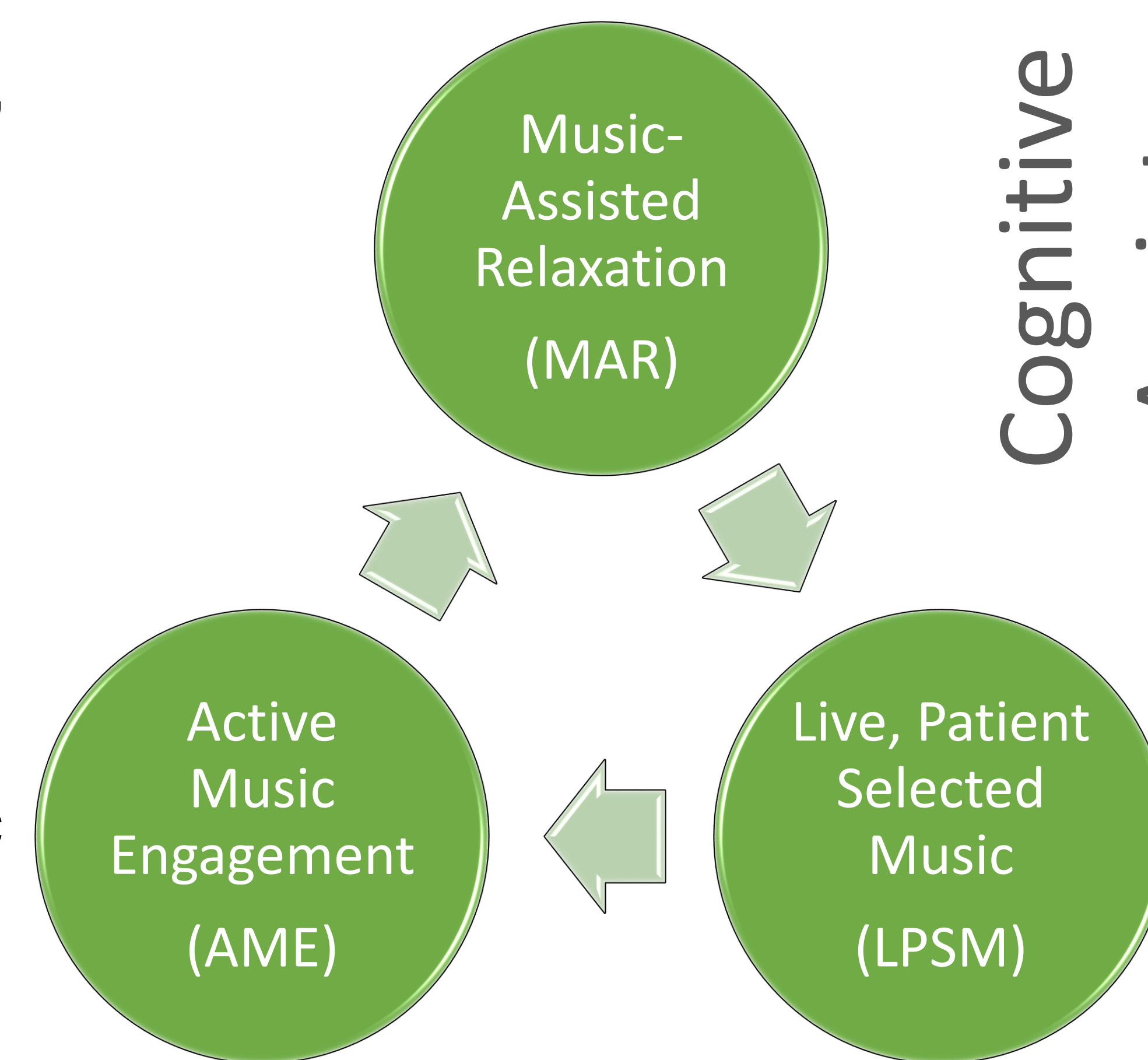
- Research in pediatric hospitals has shown that music interventions can decrease anxiety and increase relaxation responses.
- There is a lack of research on the use of music therapy with pediatric chronic pain conditions such as amplified pain syndromes.

### Purpose

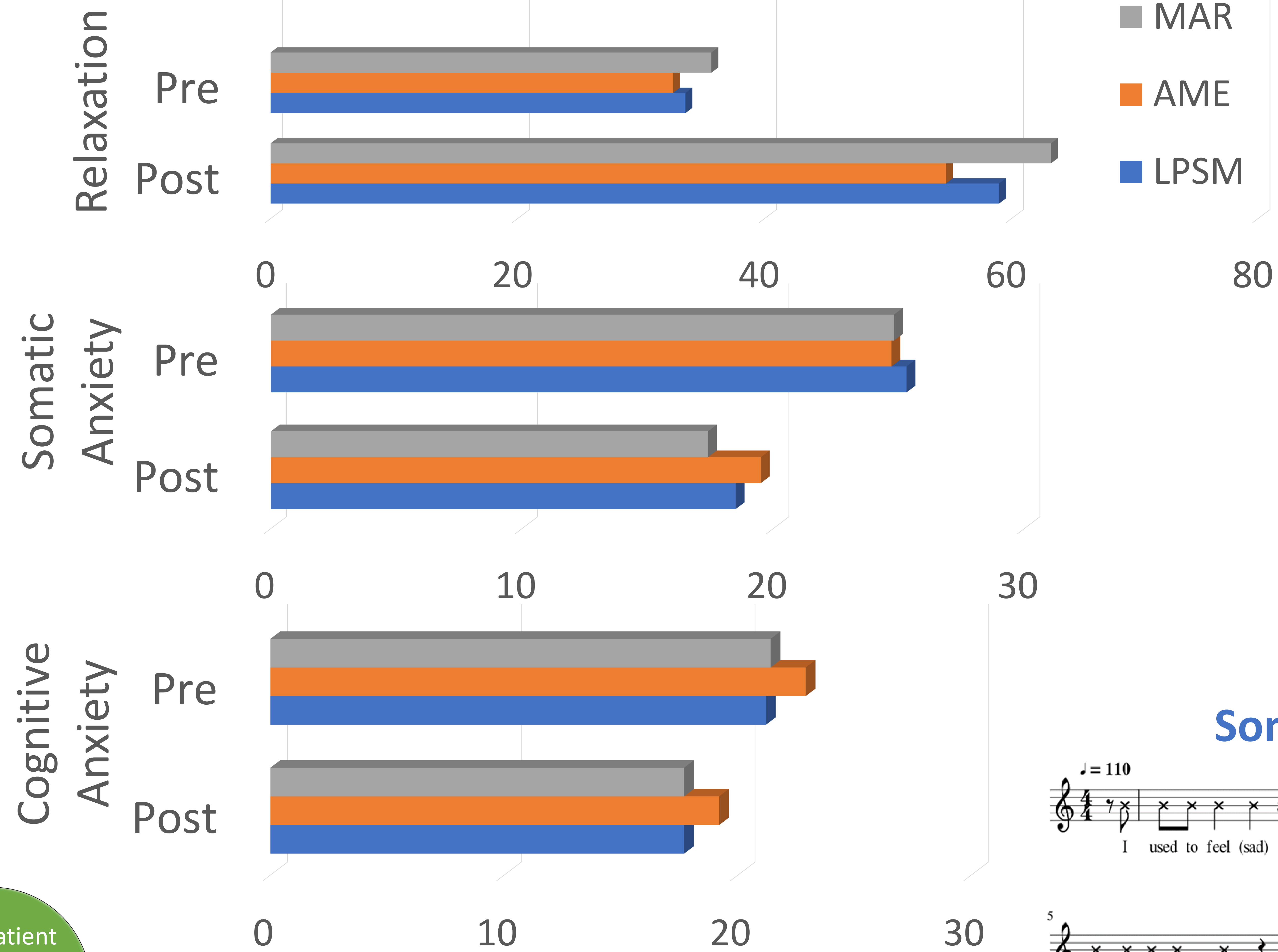
- To examine the effects of 3 specific music therapy interventions on anxiety and relaxation levels in youth participating in a 40 hour per week intensive interdisciplinary pain treatment program.

## Methods and Measures

- N=48, ages 10-18 years
- Study utilized a 3-period, 3-treatment cross-over design
- Participants received each of the 3 interventions
- Measures:
  - *State anxiety*: State-Trait Inventory for Cognitive and Somatic Anxiety for Children
  - *Relaxation scores*: Visual Analog Scale.



## Changes in Relaxation and Anxiety



## Results

- Nine paired-sample t tests were conducted to evaluate the effect of each music therapy intervention on each outcome.
  - The effects of each intervention were powerful, leading to statistically significant changes in each outcome (all  $p < .001$ ).
- Using GEE to handle longitudinal data:
  - MAR demonstrated the greatest reduction in overall relaxation levels  $t(2)=7.15, p < .05$ .
  - MAR was significantly better than AME for decreasing somatic anxiety  $t(2)=12.12, p < .01$
  - No intervention was significantly better than the others for cognitive anxiety  $p = NS$

## Song Writing Intervention

$\text{♩} = 110$   
 I used to feel (sad) (hurt) and (pain). Now I feel (tired), (stressed) and (sore). I  
 know if I push through I will (be al-right) and be (strong-er in my mind) and  
 (bo - dy).



**Conclusions: Music Therapy interventions positively affect relaxation and state level anxiety in youth with amplified pain syndromes**