



# How Can Self-Efficacy Be Impacted in Adolescents Who Participate in Karate?

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## Introduction

Mental health affects how people handle stress, interact with others, make choices, and participate in important occupations (CDC, 2022). Children with disabilities often experience social isolation, emotional dysregulation, and low self-esteem; therefore, it is crucial to find inclusive interventions to support young adolescents' mind and body development (Mathunjwa, 2024). Studies have found that karate reduces symptoms associated with anxiety and depression (Moore et al., 2019).

The purpose of this capstone project was to understand how an adaptive karate program can impact the self-efficacy of adolescents with disabilities. A secondary purpose was to identify the process for creating and modeling a karate program to meet the specific mental health needs of adolescents with disabilities.

## Methods

### Program Structure:

This program was structured as a 6-week plan comprising 12 face-to-face karate sessions lasting 30-60 minutes. Data was collected at baseline and post-intervention using the *Parental Efficacy Scale-Developmental Disability (CAPES-DD)* and the *Center for Epidemiologic Studies Depression Scale for Children (CES-DC)*.

### Recruitment:

- Between 10 and 19 years of age
- English speaking
- Persistent members of the after-school programs

### Participants:

- Ages: 10-15; (mean age=12)
- Diagnoses: down syndrome and a chromosomal abnormality
- Sample size: 3 girls

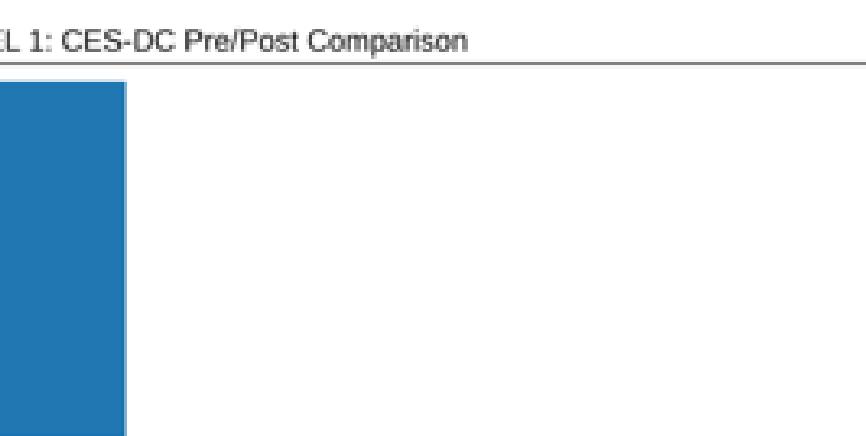
### Site:

- The Exceptional Foundation (TEF), a non-profit organization, that provides year-round social and recreational services for people with disabilities.



## Results

Figure 1A



PANEL 2: CAPES-DD Pre/Post Comparison by Category

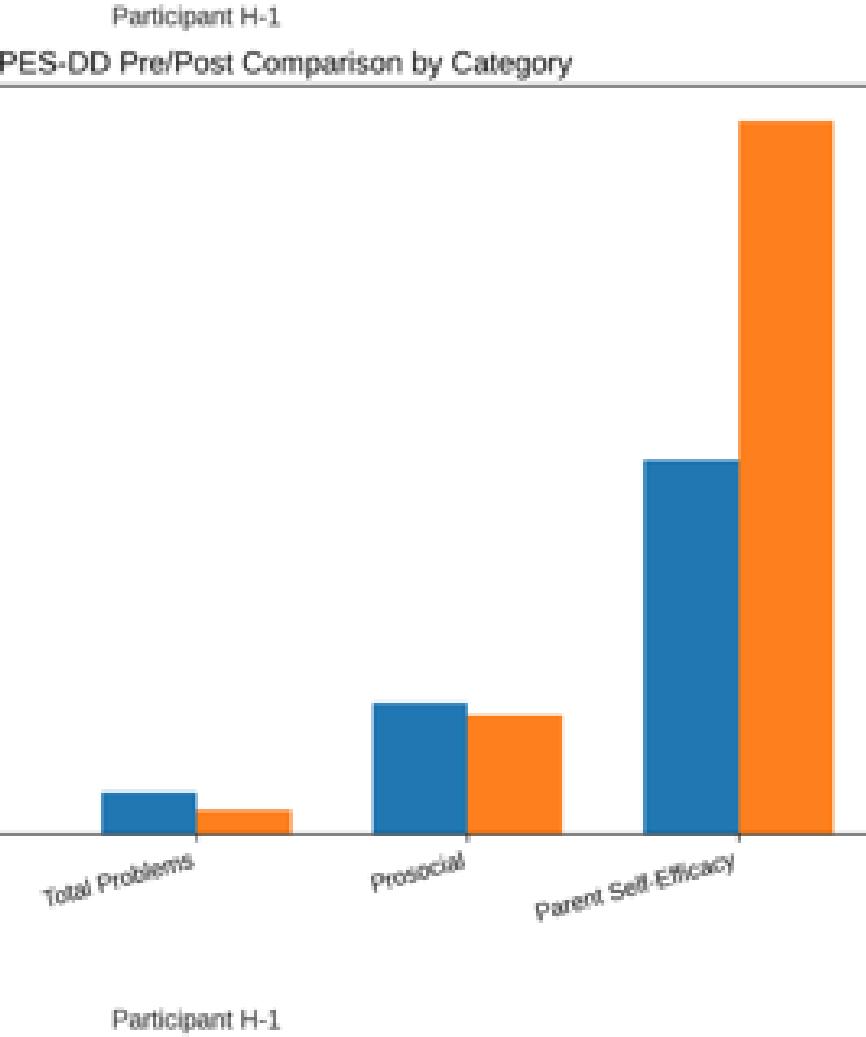
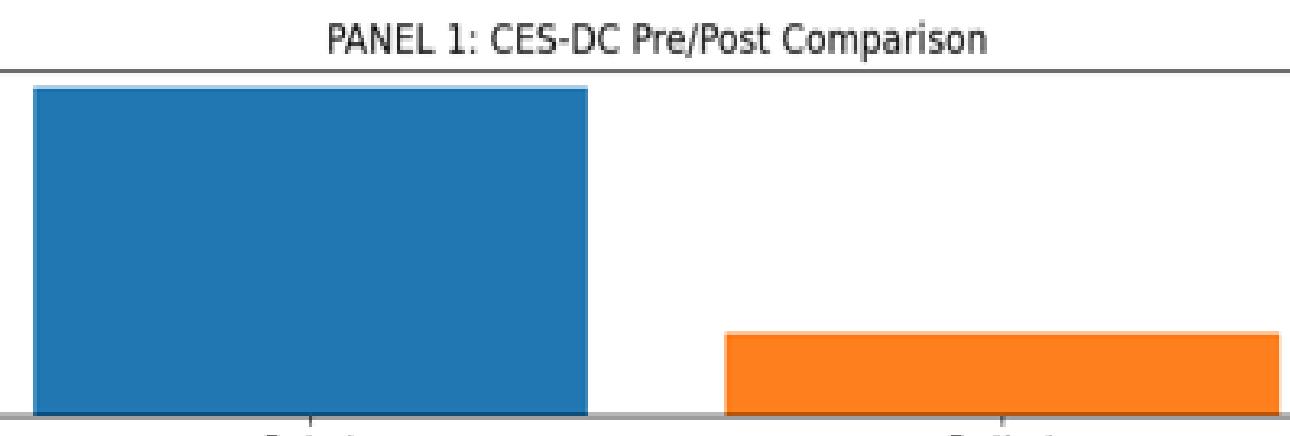


Figure 1B



PANEL 2: CAPES-DD Pre/Post Comparison by Category

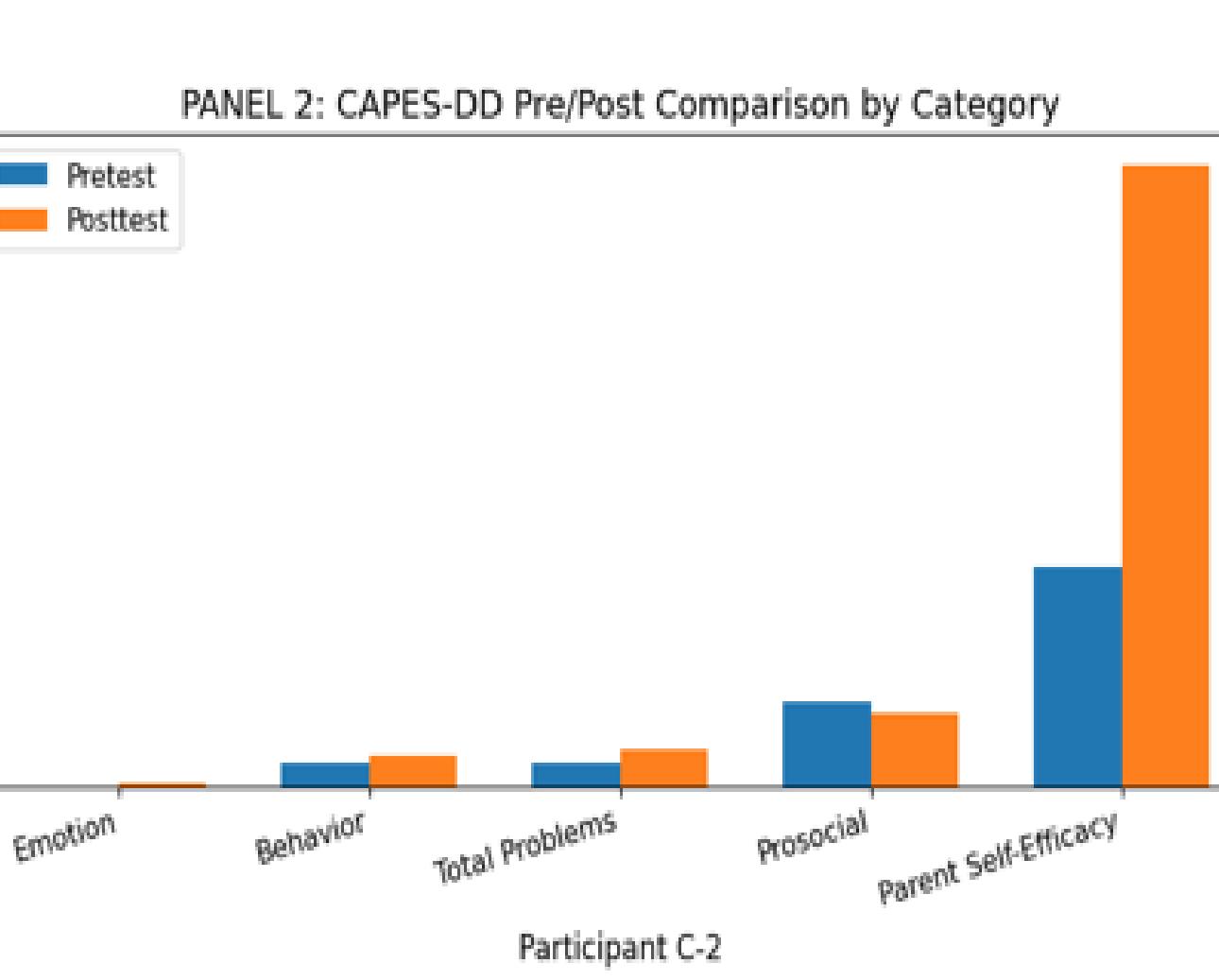
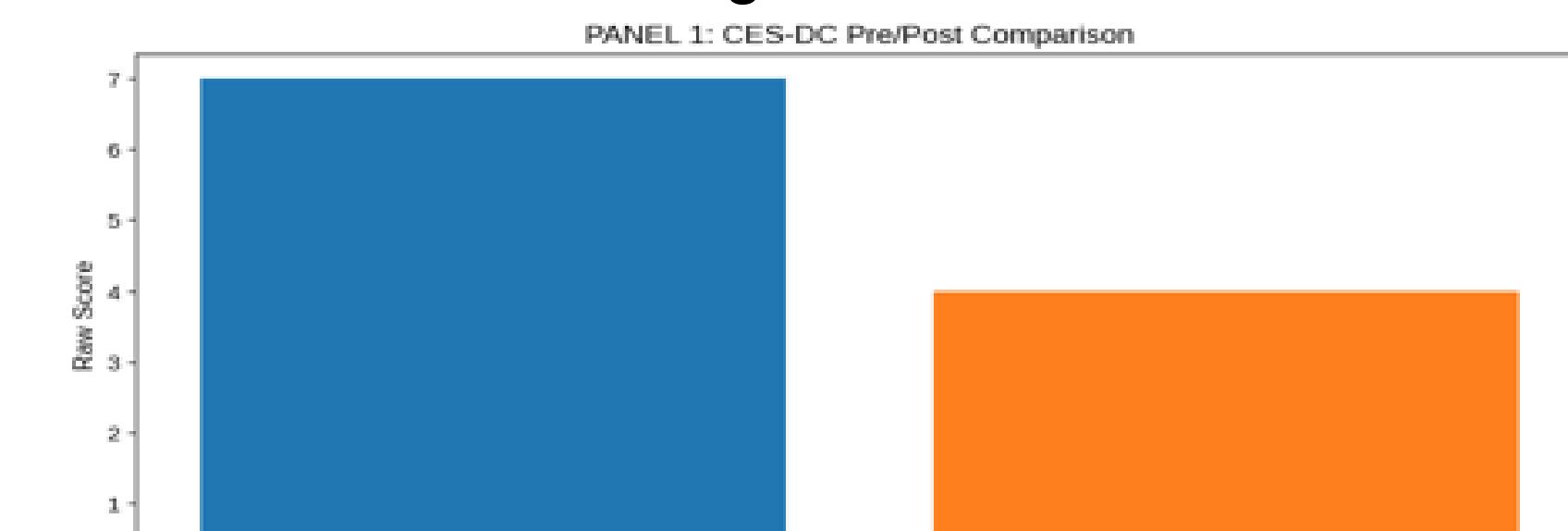
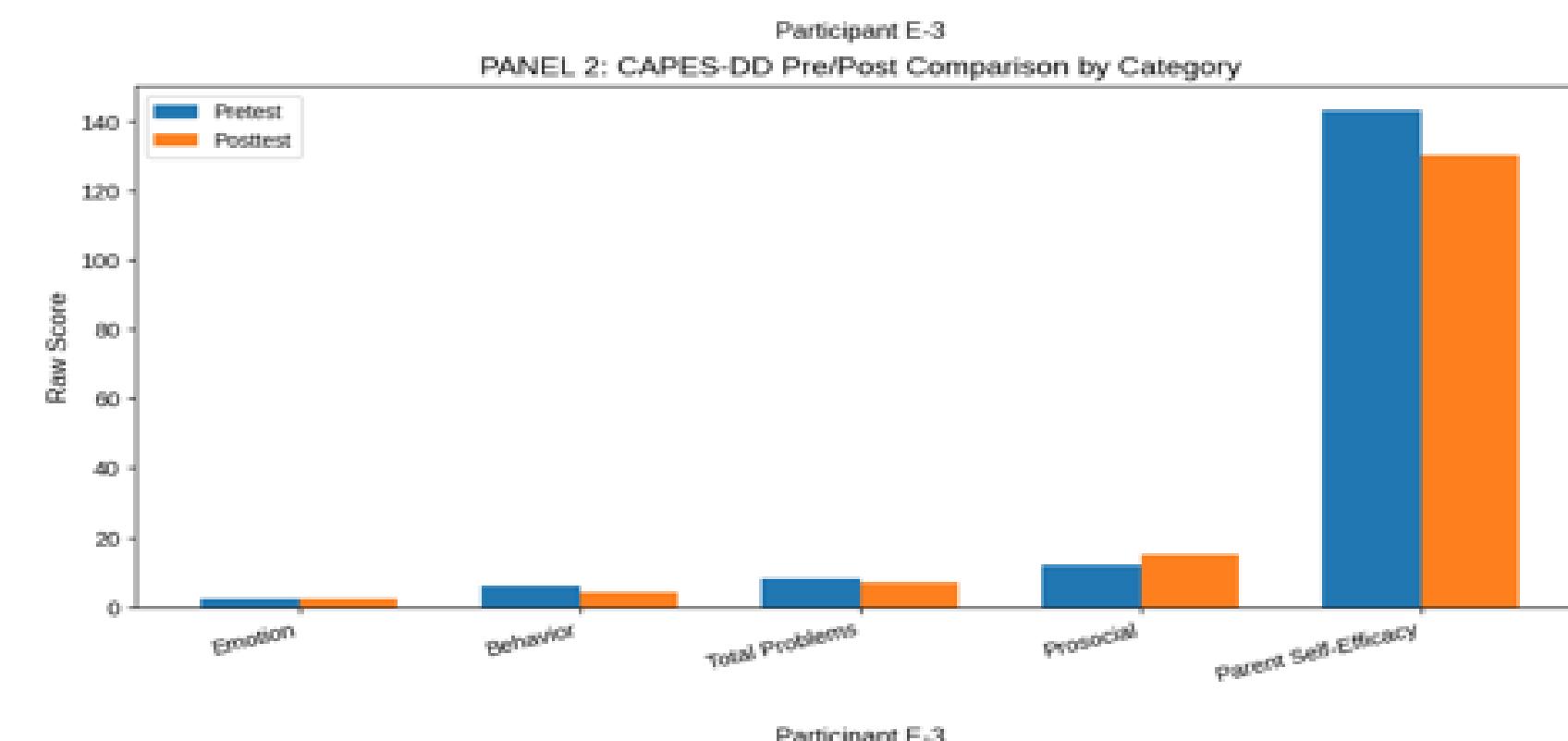


Figure 1C



PANEL 2: CAPES-DD Pre/Post Comparison by Category



## Discussion

- There is little research on self-efficacy and confidence in adolescents who participate in adaptive sports, like karate. However, the outcome measures most associated with the karate program were social inclusion and engagement, flexibility, and motor planning.
- Participation in adapted karate programs can improve motor skills and social interaction, consistent with these findings for adolescents with mild intellectual disabilities (Perić, Salapura, Džinović-Kojić, & Nešić, 2018).

## Discussion Contd.

### Limitations

- Small sample size
- Age specific inclusion criteria
- More research to advocate for karate for adults

### Future Research

- Create a karate program for a wider age range
- Conduct a more robust, longitudinal study on the effects of the karate program
- Utilize a karate sensi for teaching the program
- Change outcomes measures to: body coordination, flexibility, and balance

## Conclusion

### Implications for OT Practice

- OTs can advocate for inclusive programs, which can ultimately improve school environments and group programs.
- OTs can advocate for the art of karate to be placed under therapeutic exercise in treatment.
- OTPs can train sports instructors on adaptive strategies to use in groups.

## References

Centers for Disease Control and Prevention. (2022). *Mental health affects how people handle stress, interact with others, make choices, and participate in occupations that are important to them*. <https://www.cdc.gov/mental-health/about/index.html>

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## Acknowledgement & Contact information

Special thanks: Elizabeth Barstow, Megan Carpenter, Brandi Murphy, and the Exceptional Foundation staff and family

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