Background and Objectives
The prevalence of childhood obesity has tripled in the past three decades, creating a significant public health concern. Children with disabilities are disproportionately affected by obesity. Children with disabilities and obesity have an increased risk of developing weight-related comorbidities, including high blood pressure, hypercholesterolemia, diabetes, pressure sores, and joint or bone pain. Additionally, individuals with disabilities are less likely to participate in sustained or vigorous exercise than individuals without disabilities. To date, childhood obesity treatments have mainly centered on typically developing children. The Fit and Healthy Kids Group was created to provide exercise and nutrition education activities for obese children ages 8-18 with neurodevelopmental diagnoses. This poster will describe an effective model of service delivery appropriate for this population. Developing effective methods to treat obesity among children with disabilities is essential to promoting health and wellness, reducing risk of secondary conditions, and addressing obesity in childhood.

Methods
Children ages 8-18 with neurodevelopmental diagnoses and obesity participated in a multidisciplinary group consisting of PT and nutrition services. Sessions lasted for 90 minutes once a week for ten weeks. Children participated in aerobic activities and strength training exercises modified and progressed as needed, followed by nutrition education (hands-on demonstrations and nutrition education games). Participants were expected to follow weekly exercise and healthy eating goals.

Outcome Measures
- Bruininks-Oseretksy Test of Motor Proficiency, Second Edition (BOT-2)
- 6-Minute Walk Test
- Timed Up and Down Stairs Test
- Children’s Effort Rating Table
- Nutrition Screening Questionnaire
- Consumption frequency of fruits and vegetables, sweetened beverages, breakfast, eating together as family, eating out, eating fast food
- Time spent with screen media
- Number of days per week exercising at least 60 minutes

Physical Activity
- 15-20 minutes cardiovascular activity with interval training
- 20 minutes closed chain strength training, large muscle groups
- Lunges
- Squats
- Bridges
- Quadruped push-ups
- Step-ups
- Crunches
- Resistance added as children progress

Nutrition Education Topics
- Healthy plate model of eating
- Sugar sweetened beverages
- Fruits and vegetables
- Eating out
- Eating healthy breakfasts
- Healthy snacks
- Healthy portion sizes
- Maintaining a healthy environment
- Wellness Jeopardy Game/Review

Results
At baseline the children demonstrated well below to below average skills on the BOT-2 subtests, showed decreased strength in core and upper and lower extremities, and had decreased cardiovascular endurance. Caregivers also reported suboptimal eating habits for their children. At the end of the ten weeks, participants recorded increases in strength and endurance as well as improvements in healthy eating habits. Participants and caregivers reported high satisfaction with the group program.

Discussion
The Fit and Healthy Kids group is a weekly physical activity and eating habit intervention created for children with neurodevelopmental diagnoses and obesity. Group therapy can be an effective treatment to improve health and fitness in this population. Barriers to exercise for children with cognitive and physical disabilities may also experience sensory issues or food selectivity, limiting accepted food options. Some participants required modifications in the nutrition education lessons and activity selections due to cognitive impairments.

Conclusions
Children with disabilities are at an increased risk of developing obesity, necessitating development of specialized programs tailored for this population. Proper exercise selection and progression, as well as knowledge of barriers to healthy eating, are key when working with this population. Regular, periodic follow-up is indicated to ensure long-term maintenance of healthy behaviors. Lessons learned can be applied to additional populations of individuals with disabilities. Parental understanding is critical to ensure follow-up and to reinforce overall health and fitness with participants. With guidance, children with physical and cognitive disabilities are able to improve their overall health and fitness.