Benefits of a Fitness Program for Individuals with Autism Spectrum Disorder: Physical, Behavioral, and Emotional Outcomes
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Results

• BMI scores were reduced in over half (n=6) of the participants, but overall there was no change in mean BMI score from baseline (M=33.8, SD=5.8) to follow-up (M=33.9, SD=4.5). Improvements were found, on average, across all strength assessments with significant improvements in core strength (increased PLank Hold: t(10)=2.4, p<.05) and marginal changes in lower body strength (increased number of burpees: t(10)=2.1, p=.06; increased Hamstring Bridge time: t(10)=2.5, p=.05).

• SRS-2 scores produced a non-significant reduction in mean Social Communication and interaction scores from baseline (M=79.5, SD=13.1) to follow-up (M=76.9, SD=14.9) and a significant reduction in Restricted Interests and Stereotypic Behaviors from baseline (M=82.5, SD=12.4) to follow-up (M=73.7, SD=9.7) (t(10)=2.5, p<.05).

• CSHQ scores produced a non-significant reduction in overall sleep disorders (Total Score) from baseline (M=43.3, SD=6.0) to follow-up (M=41.3, SD=6.5); no change in bedtime Resistance from baseline (M=83.8, SD=2.9) to follow-up (M=86.6, SD=3.1); and an increase in Daytime Sleepiness from baseline (M=11.5, SD=5.2) to follow-up (M=10.0, SD=4.2) (t(10)=1.9, p=.09).

Conclusions

• Results of this study provide preliminary support for the positive impact of specialized physical exercise programs for individuals with ASD.

• While positive patterns of change in the assessed measures of participant physical, behavioral, and emotional attributes following 15 trained workout sessions aligned with findings from the exercise literature in typically developing samples, most of these impacts were not substantial enough to reach statistical significance, perhaps due to the small sample size and/or the short duration of the intervention.

• Participants did demonstrate significant improvements in core strength, significant reductions in restricted and repetitive patterns of behavior, near significant improvements in lower body strength, and marginal reductions in issues with daytime sleepiness.

• Considering the potential wide-ranging benefits that regular physical activity can have on the well-being of individuals with ASD, it is critical for further research to be done on this topic, so that we may have a greater understanding of its benefits, and to encourage the development of physical activity/fitness programs specifically designed for the needs of individuals with ASD.

Thank you to the ASD Fitness Center and their staff for their support with this study!

Funding Sources:
NIMH R01 MH100173 (McPartland)  
NIMH T32 MH18626 (Crowley)