Can Non-Exercise Science Majors Direct an Exercise Program for Children with HFASD?

Lillian C. Wozniak, Samantha R. Crane, Adam J. Booth, PhD., Jonathan D. Rogers, PhD., Christopher J. Lopata, PsyD., Marcus L. Thomeer, PhD., Karl F. Kozlowski, PhD., Canisius College, Buffalo, NY

PURPOSE: This study assessed the feasibility of offering a high intensity exercise program for high-functioning children with autism spectrum disorder (HFASD) by clinicians not pursuing a degree in the exercise sciences. METHODS: Children with HFASD participated in 1-hr exercise sessions 2d/wk for 5 wks instructed by clinicians pursuing non-exercise science degrees. To prepare for the exercise program, clinicians underwent a 40-hour training week, completed a written evaluation with 100% accuracy, and led a practice exercise session with at least 90% fidelity. Fidelity of implementation was assessed in 90% of sessions by research assistants not involved in the delivery of exercise treatment that session. Inter-rater reliability of the fidelity assessment was used throughout. Staff satisfaction questionnaires were given at the end of the program to evaluate the strengths and weaknesses of the program. The questionnaire consisted of 8 questions using a likert scale of 1-7 (1 = strongly disagree; 7 = strongly agree) and an open-ended question regarding comments on the program.

RESULTS: Satisfaction questionnaires indicated the staff strongly agreed to recommend this experience to others ($M:6.56 \pm 0.53$), and the overall feeling about the program was positive ($M:5.67 \pm 0.71$). During training week, the program was administered by the clinicians very accurately (93.7%) and fidelity implementation remained consistent throughout the 5 weeks (93.8%). Inter-rater reliability was very high through the program ($M:99\% \pm 1.69$). Although the clinicians instructed the program with high accuracy, both quantitative and qualitative data indicates that the non-exercise science majors would like more support ($M:3.78 \pm 1.79$). CONCLUSION: It is feasible to train non-exercise science majors to run a high-intensity exercise program for children with HFASD.