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Assessing the Feasibility of Whole-Body Vibration Training on Individuals with Autism

Amy Allnutt, Sara Pappa, Michael Nordvall. Marymount University, Arlington, VA

Individuals with autism spectrum disorder (ASD) have a high propensity for a sedentary lifestyle which contributes to morbidities such as cardiovascular disease and muscular atrophy. Unlike traditional aerobic and resistance exercise, whole body vibration (WBV) training provides a novel therapeutic approach for special populations who have limited motor control, time, and mobility. **PURPOSE:** The aim of this study was to assess the feasibility of a six-week WBV training program on individuals with ASD while measuring body composition, leg strength, blood pressure, waist hip ratio (WHR), and body mass index (BMI). **METHODS:** After meeting inclusion criteria, six individuals (age, 22.17 ± 2.14 years) diagnosed with ASD participated in a six-week, twice per week exercise intervention on a WBV machine ranging in duration from 10-24 minutes at intensities from 5-25 Hz. Measures of central tendencies and *t*-tests were used for data analyses. **RESULTS:** Findings indicated that WBV is a feasible and safe intervention for ASD individuals, however it did not elicit statistically significant improvements in WHR, body composition, leg strength, blood pressure, and BMI. This may be attributed to the small sample size as data indicates improvement in leg strength (20.55 ± 15.06 vs. 28.46 ± 12.16, p = .148), BMI (25.16 ± 4.30 vs. 25.07 ± 3.70, p = .806), and WHR (.848 ± .080 vs. .826 ± .086, p = .166) for some participants. **CONCLUSION:** This research study showed that WBV training is a well-tolerated exercise modality for some individuals with ASD and may be a potential strategy for improving cardiovascular disease risk factors. WBV training may also aid in reducing sedentary behaviors and provide a foundation for future investigation in individuals with autism. **SIGNIFANCE/NOVELTY:** This is the first study to evaluate WBVexercise as a training modality for adults with autism.

The researchers report no conflicts of interest for this study. Two WBV machines were granted by Hypervibeä in order to undertake this investigation. No individual or other entity from or acting on behalf of Hypervibeä was involved in the design or any other aspect of this research study.