**GUIDELINES ON IMPLEMENTING AEROBIC EXERCISE FOR PEOPLE WITH AUTISM SPECTRUM DISORDER AND AN INTELLECTUAL DISABILITY**

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**Objectives:** Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that is characterized by (a) deficits in social and communicative functioning and (b) behaviours, interests and activities that are restricted and repetitive in nature. Thirty-one percent of individuals with ASD also have an Intellectual Disability (ID) and many individuals with ASD have motor impairments (e.g., hypotonia, apraxia, toe-walking, delayed gross and fine motor milestones, and/or reduced ankle mobility). Additionally, individuals with ASD are at risk for health problems due to inactivity. Importantly, people with ASD who have engaged in an exercise program have shown distinct benefits such as improved cardiorespiratory fitness and muscular strength. Unfortunately, people with ASD have decreased levels of physical activity and increased sedentary behaviours, thus it is important to determine motivational tools and factors around increasing the physical engagement of people with ASD-ID.

**Methods:** Case studies were conducted on six adults (>18 years of age) with a diagnosis of ASD-ID. Participants exercised on a stationary bike twice a week for eight weeks plus a familiarization day. Each biking session was 20-minutes in length with a 5-minute warm up and a 3-minute cool down. Detailed notes were taken during each exercise session (e.g., overall speed, the number of times he/she stopped biking, the type of motivation used and its effectiveness).

**Results:** The motivational tools used and the progress made by the participants throughout the program were specific to each individual. The guidelines that emerged from the individual observations were separated into two categories (a) guidelines for practitioners, and (b) suggested methods of verbal encouragement.

(a) Practitioners are encouraged to: understand that the physiological signs of exertion may be different for each person, break down complex movements into small components (using visual and verbal guidance), implement a familiarization day at the beginning of the exercise program, take detailed notes at each exercise session, adjust the exercise environment to the participant’s needs (i.e. lowering the temperature of the room), and ensure participants pace themselves in each session.

(b) Suggested methods of for verbal encouragement include: motivational chants/songs, breaking down each session into distinct time segments (e.g., half-way or 5 minutes left), mid-session adjustments (i.e. changing the motivational tool due to certain repetitive behaviours), having the practitioner exercise (i.e. jogging next to the bike, or performing specific tasks when the participant reaches a certain speed or distance), and redirecting the participant’s focus back to exercising (e.g., make-believe racing game, or singing a familiar song).

**Discussion/Conclusion:** Understanding each participant and the motivational tools they require is important to increasing their physical engagement. Some participants may benefit from continuous encouragement whereas others preferred intermittent breaks in motivational chants/songs. Additionally, the motivational tools used may change from session to session. Having a support worker or family member present can aid in understanding the motivational tool each participant may need. Additionally, the level of enthusiasm and attention to detail from the practitioner will alter the participant’s performance. Overall, this study provides guidelines for practitioners to increase the level of physical engagement for people with ASD-ID.

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