BRIEF REPORT: Bystander Perceptions of an Exercise Program for Adults With Autism Spectrum Disorder and an Intellectual Disability Within a University Setting

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Abstract

Individuals with disabilities are less likely to partake in community-based recreation activities if they perceive negative attitudes from other community members. This study sought to evaluate the impact of an adapted physical exercise (APEX) program for adults with autism spectrum disorder and intellectual disability on members of a university fitness facility (i.e., bystanders). Seven bystanders (all university students) who had been present during APEX training sessions participated in a semi-structured interview. Emergent themes and sub-themes indicated that inclusion of individuals with disabilities within a university fitness facility also benefits program bystanders.

The prevalence of autism spectrum disorder (ASD) has risen dramatically in recent years, with nearly an 80% increase in ASD diagnoses between 2002 and 2008 (Elsabbagh et al., 2012; Centers for Disease Control and Prevention [CDC], 2012). In 2010, one in 68 children were diagnosed with the disorder (CDC, 2014). Within Canada, the incidence of ASD across various regions is increasing annually between 9.7% and 14.6% (Ouellette-Kuntz et al., 2014). Moreover, according to one source, 31% of ASD cases co-occur with intellectual disability (ASD-ID; CDC, 2014). Due to this rapid rise in prevalence rates, finding effective ways of integrating individuals with ASD into the community is paramount.

Social inclusion and interaction between individuals with ASD and their peers is a promising area of research (Simplican, Leader, Kosciulek, & Leahy, 2015; Sutherland, Ivey, & Woodruff, 2013; Walton & Ingersoll, 2013). Much of the current literature highlights the importance of exercise interventions to help reduce stereotypical behaviours, as well as how peer-mediated interventions through inclusive environments help those with ASD (DiSalvo & Oswald, 2002; Koegel, Vernon, Koegel, Koegel, & Paullin, 2012; Petrus et al., 2008). It is believed that peer involvement increases the number of available intervention agents, fosters inclusion in school settings, and helps to build relationships between individuals with disabilities and their peers (Walton & Ingersoll, 2013). Peer-mediated interventions have been found to have a positive impact on several social and communication behaviours in individuals with ASD (Walton & Ingersoll, 2013).

Recent research suggests that people with disabilities are less likely to partake in community-based recreation activities if they perceive negative attitudes from others in the community (Choi, Johnson, & Kriewitz, 2013). Importantly, perceived social acceptance and frequency of leisure participation are positively and meaningfully correlated in individuals with disabilities (Choi, Johnson, & Kriewitz, 2013; Devine & Dattilo, 2001). Less is known about the impact that interventions have on others, specifically those who are not the primary target of the intervention. Therefore, the purpose of this qualitative inquiry was to determine the impact of the adapted physical exercise (APEX) program on program bystanders. To our knowledge, this is the first study to examine the integration of adults with ASD-ID within a university fitness facility and the impact of this integration on other gym members (i.e., the "bystanders" of the intervention). Given our intention to understand perceptions of disability, and the effect of integration on such socially prevalent assumptions, we situate this research within critical disability theory. In doing so, a social constructionist epistemology is adopted where we recognize disability as a social phenomenon that is constructed through interactions between humans and their world (Chadwick, 1994; Crotty, 1998; Pothier & Devlin, 2006).

Methods

Participants

An APEX program hosted at the University's campus fitness facility provided a 12-week whole-body circuit-training regimen for 14 adults with ASD-ID (age range = 18–62 years; 2 females; IQ scores from previous clinical assessment = 20 to 70). The program took place during the facility's off-peak attendance times, and each participant was paired with a personal trainer (1:1 ratio). The program featured staggered participation, where small groups of participants with ASD-ID and their personal trainers were exercising in different parts of the fitness facility (e.g., four on cardio machines, four on strength machines, and four in the field house playing sports/games). Considering this set-up, bystanders were exposed to up to eight people with ASD-ID, plus their personal trainers, within the same fitness space at a given time.

Over the 12 weeks, two of the co-authors (RJM and KC, who attended every session) approached gym members (*n* = 6) and staff (*n* = 1) who were identified as being regularly present during the APEX program training sessions to distribute an informational flyer about the study. All those who were approached agreed to participate (3 males, 4 females; age range 19–49 years; mean age = 28.9 years; all university students) and provided informed consent. Ethics clearance for this research project was obtained through the University of Windsor Research Ethics Board.

Interview Format

Each participant took part in a brief, semi-structured interview. The interview guide contained questions that aimed to determine any potential impact the APEX program had on these bystanders, their time in the facility, and their workout routines. The questions also attempted to determine any changes in the perceptions these program bystanders had towards individuals with ASD-ID after being indirectly exposed to the APEX program. Although this interview guide provided the basic topics to be discussed, the semi-structured interview permitted the exploration of new topics that emerged during individual interviews (Patton, 2002). Details about the semi-structured interview are available upon request.

Analysis

All interviews were audio-recorded and transcribed verbatim by the lead author. In accordance with hierarchical content analysis, an inductive approach was used in which quotes from the interviews were coded as meaning units (Côté, Salmela, Baria, & Russell, 1993). A meaning unit is defined as a "…segment of text that is comprehensible by itself and contains one idea, episode or piece of information" (Côté et al., 1993, p. 131). To illustrate, a meaning unit outlined in Table 1 on the following page includes *It didn't [affect my personal workout], no more than anybody else*. According to the definition provided by Côté et al. (1993), this segment of text can be classified as a meaning unit as it is a single idea expressed by a participant that is understandable by itself. All meaning units were then compared and organized based on common

Table 1. Overview of Themes and Sub-Themes of Bystander Interviews

Theme	Sub-Theme	Meaning Units
The significance of inclusivity	The importance of exposure	"I think it would be great if more students could be exposed to it [the APEX program]… Not just people being involved in the research, but just being a bystander around it… The more people are exposed to those with disabilities, the more they'll understand, the less likely they are to discriminate."
		"The more times [you're exposed to individuals with disabilities] in any sort of situation, the less likely someone is going to feel uncomfortable or feel judgmental about it in a different situation like at work or school."
	Supportive of inclusive fitness facilities	"If I had a gym that did not allow that [the participation of individuals with ASD-ID], I probably wouldn't join that gym."
		"I love gyms that are really focused on the people of their gym."
Effect on bystanders' personal workouts	Any other day at the gym	"Basically the same [a program participant's vocalization] as the jock people that are screaming when they're lifting. It's basically the same, or actually less annoying."
		"It didn't [affect my personal workout], no more than anybody else."
	A source of motivation	"It pushed me because if I was having a tough time in my workouts, I would look and see how hard these individuals [with ASD-ID] were pushing themselves and I was like 'well if they are pushing themselves to do that… Then you can do this today as well, [you can] get through this.'"
		"When they [a gym bystander] would get a smile from one of your participants [with ASD-ID] they would be in a better mood, so it was great. It was almost like a contagious thing."

features in order to be grouped into sub-themes (Côté et al., 1993; Tesch, 1990). These sub-themes were then analyzed further and grouped into distinct themes based on similarities (Côté et al., 1993; Tesch, 1990). The sub-themes and themes remained flexible during analysis and were refined and debated amongst the co-authors until a classification system evolved that best represented the qualitative material while limiting any overlap between themes.

Results

Two themes and four sub-themes were established from the bystander interview responses.

The first theme was *the significance of inclusivity,* which included the sub-themes *the importance of exposure* and *supportive of inclusive fitness facilities.* The second theme was the *effect on gym bystanders' personal workouts,* which included the sub-themes *any other day at the gym* and *a source of motivation.* Please refer to Table 1 for an overview of these themes, sub-themes, and meaning units.

Discussion and Conclusion

Our findings suggest that the attitudes of members of our university fitness facility are positive and encouraging regarding the integration of individuals with disabilities, specifically

ASD-ID, exercising within a university gym environment. These bystanders recognized the importance of exposure to individuals with disabilities in order to become more familiar and comfortable, noting that exposure would likely reduce discriminatory behaviours and attitudes as well as improve perceptions of the capabilities of those with disabilities. Furthermore, bystanders identified that their time at the gym was unaffected by the APEX program participants. In some cases, participants identified preferring the presence of individuals with ASD-ID compared to stereotypical gym members.

A potential limitation to this study is the relative homogeneity of the sample. University students may not represent the views of the broader community or those held by members of fitness facilities outside of a university environment (Yazbeck, McVilly, & Parmenter, 2004). Despite this, the results are encouraging and suggest that further research incorporating more diverse samples is warranted. The inclusion of individuals with disabilities within a university fitness facility appears to have a positive impact, with mutual benefits for individuals with disabilities and the program bystanders. This research supports the findings of Brasile (1990), who stated that the inclusion of individuals with disabilities into the general community promotes a better understanding of the broad scope of their capabilities. This research will provide foundational information for future studies on how the inclusion of people with disabilities in a community-based exercise facility is perceived by other community members.

Key Messages From This Article

People with disabilities. Participating in an exercise program can benefit your physical and mental health. However, by exercising within a community gym, you are also providing a positive impact on other gyms users. Specifically, you are helping community members to better understand your capabilities, which has the potential to reduce discriminatory behaviours and attitudes towards people with disabilities.

Professionals. It is important for community fitness facilities to offer exercise programming for people with disabilities during normal hours of operation. By providing this inclusive environment, community members are given an opportunity to witness the capabilities of people with disabilities, which can lead to a more inclusive community.

Policymakers. Policy to support exercise programs within community fitness facilities for people with disabilities should be established. Not only will it enhance the health and well-being of people with disabilities, it also provides an opportunity for other community members to learn about the capabilities of people with disabilities.

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