SPARC – A Community-based Participatory Research Project with Youth with Autism Spectrum Disorders

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SPARC – A Community-based Participatory Research Project with Youth with Autism Spectrum Disorders
Richard Fleming, Department of Exercise and Health Sciences

About SPARC
SPARC (Supporting Physical Activity and Recreation in the Community) aims to meet a community-identified need for more physical activity programming for youth with autism spectrum disorders (ASD). SPARC’s collaborative approach addresses the unique social, cognitive, behavioral, and physical needs of this growing population of children by infusing diverse perspectives into its model. This project incorporated a CBPR conceptual and methodological model, a strong community partnership, and an evidenced-based instructional approach, to develop and evaluate a community-based walking program for adolescents with ASD.

Why SPARC?

The SPARC Model

12-Member Community Advisory Board
Interdisciplinary Research Team

Shared Vision & Goals

SPARC Partners
Malden YMCA
Newton YMCA
YouthCare, Inc.
UMass Boston
UMass Medical

A Walking Club

Outcomes
Why SPARC?

What We Know

• Adolescents with ASD have been found to have significantly lower levels of physical fitness and higher levels of sedentary behavior than their age matched peers.

• Physical activity in children with ASD has been shown to decline by middle childhood and adolescence, in part because they neither possess the skills to participate in regular PA or qualify, based on their disability, for existing exercise and sport programs.

• Rates of overweight and obesity in children with ASD appear to be as high or slightly higher than in children without ASD.

SPARC Goal

To foster healthier lifestyles and reduce risk of chronic health problems among youth with ASD.
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Developing Shared Vision & Goals

- Adolescents with ASD
- Parents
- Speech/language pathologist
- Adapted physical ed specialists
- Certified personal trainer
- Recreation director
- Organization youth-care director

12-Member Community Advisory Board

Engaged in 5 meetings

Interdisciplinary Research Team

Consensus to:

Pilot/test a community walking program with adolescents aged 12-17 with autism

- Context: In community YMCAs
- Scope: Set motivating goals for moderate to vigorous physical activity (MVPA)
- Recruitment: Youth with “moderate” autism, a sub-group of children with ASD for whom there is less health research and greater need for support.

A Walking Club

- Psychology
- Adapted physical activity
- Social work
- Physical therapy
- Nutrition/dietetics
- Disability law
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Implementing A Walking Club

An example of a social story

Behavioral Strategies:
• Picture-supported instructions
• Social stories for each activity
• Goal setting via steps
• Monitoring by pedometer to increase level of activity
• Feedback and social reinforcement

Organizational Capacity Building:
• Trained coaches in behavioral support strategies

Parent and Family Engagement:
• Passport to Walking Fitness enables communication and reinforcement

CONTEXT

DURATION

YMCAs 2
Adolescents 12
Coach-Youth Ratio 1:2

3 Months
32 Sessions
90 Minutes
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Implementing A Walking Club

In the spring, participants walk outdoors in various neighborhood settings.

Games are incorporated into the walks, such as this “Scavenger Hunt Walk.”

Participants walk indoors in the winter.

To assess the results of the Walking Club intervention, we used **accelerometry**, or number of steps, as our activity measurement.
Participants also formed friendships around health during the sessions and were supported by their peers.
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Participants gained knowledge about community resources, such as within YMCAs and neighborhood walking options.
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The program helped participants build social skills and self-efficacy.
In addition to the project’s community partners, 8 co-researchers led the research aspects of SPARC and are co-authoring a publication to share what is learned from the research.

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