

# The Effects of Photographic Activity Schedules on Moderate-to-Vigorous Physical Activity in Children with ASD

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# Physical Activity and Autism Spectrum Disorders



1. Ogden, Carroll, Kit, & Flegal (2012)
2. American Psychological Association (2013)
3. Hinckson et al (2013)
4. U.S. Department of Health and Human Services (2012)



# Physical Activity and Autism Spectrum Disorders

## MVPA

- Moderate-to-vigorous physical activity reduces risks associated with obesity in children<sup>1</sup>

## OSRAC<sup>2</sup>

- Observational System for Recording Physical Activity Codes

## Activity Schedules<sup>3</sup>

- Sequence of pictures that prompt engagement
- Increase number of engaging activities

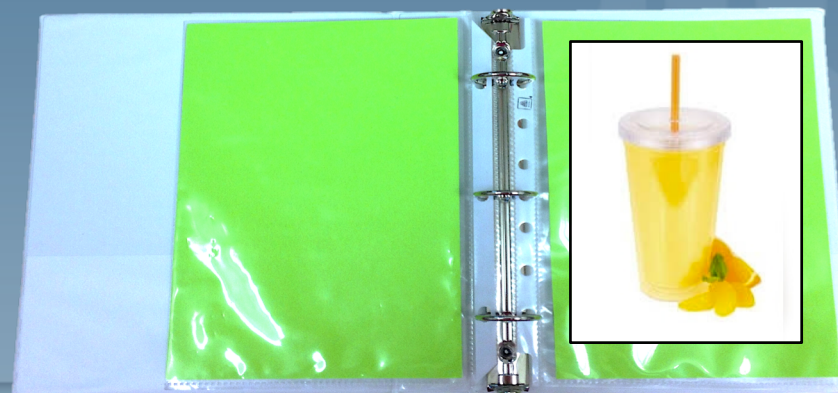
## Purpose

- Assess the effects of photographic activity schedules on MVPA and varied play across two contexts for preschoolers with ASD

1. U.S. Department of Health and Human Services (2012)
2. Brown, et al. (2009), Hustyi, Normand, Larson, & Morley (2012)
3. McClannahan & Krantz (2010), Akers, Higbee, Pollard, Pellegrino, & Gerencser (2016), Torres, DeBar, Reeve, Meyer, & Covington (2018)

# Settings & Materials

Hustyi, Normand, Larson, & Morley (2012)



# Method

- Participants
  - Three 4-year-old preschoolers with ASD
  - Mastery of activity schedules (academic/leisure items)
- Dependent Variable
  - Percent MVPA
  - Percent activity schedule following
  - Number of different activities



# Design and Conditions

∞ Non-concurrent multiple baseline across participants

Context Assessment (Multielement design)  
Picture-Activity Correspondence Pretraining



Baseline  
Schedule probe      Generalization probe

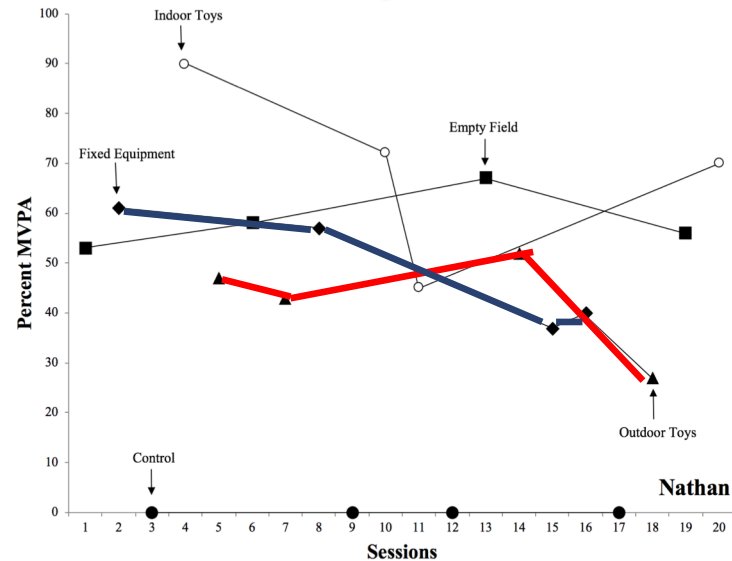
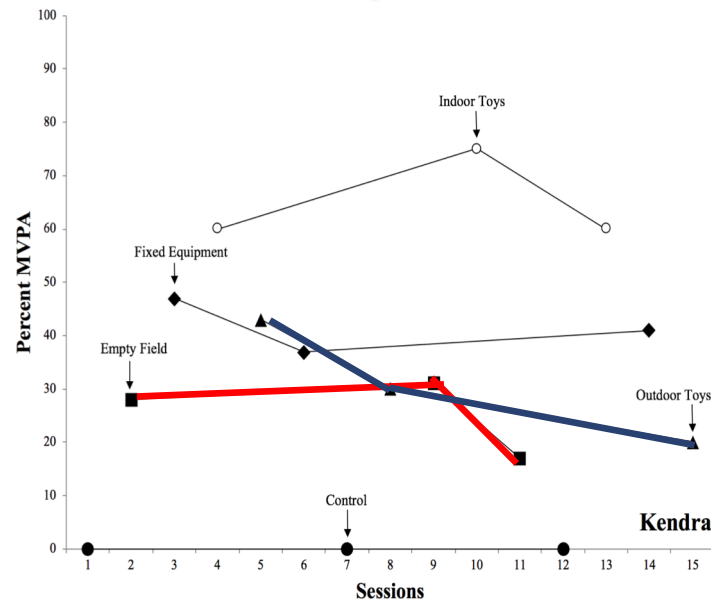
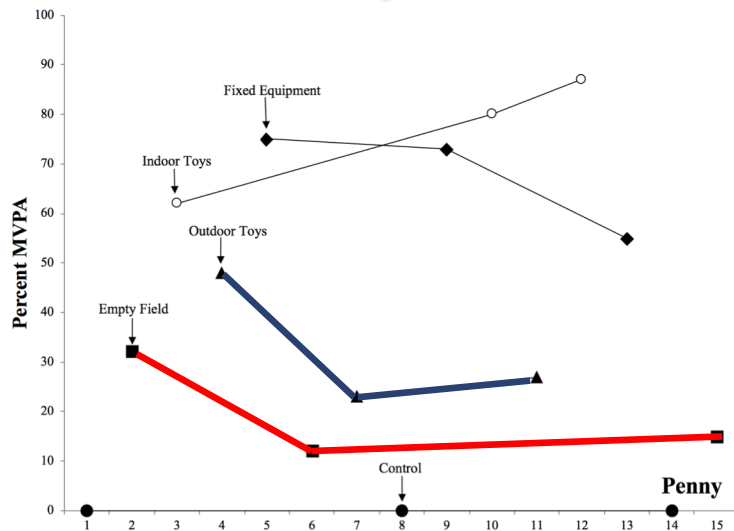


Activity Schedule Teaching  
No schedule probe      Generalization probe



2-week Maintenance Probe

# Context Assessment Results



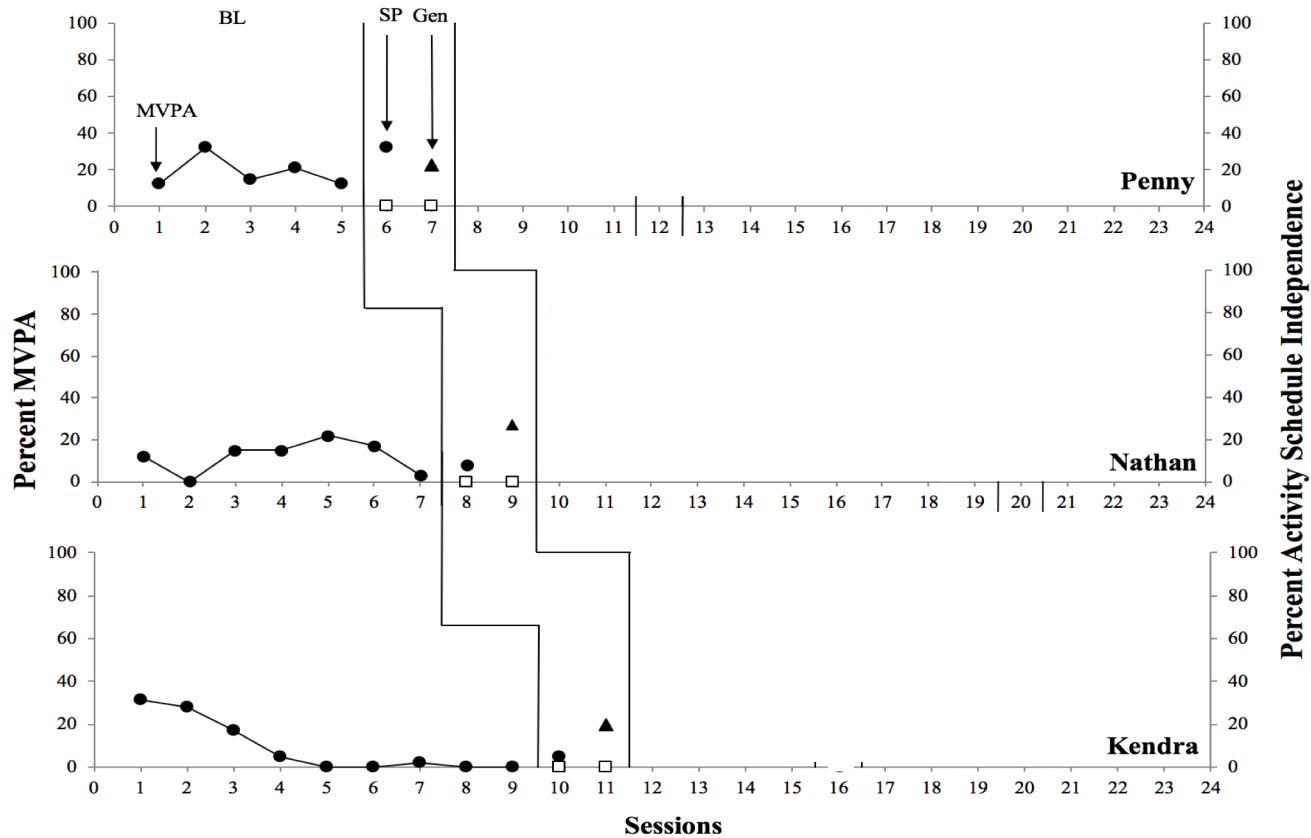
- Penny:** Empty Field
  - Outdoor Toys
- Nathan:** Outdoor Toys
  - Fixed Equipment
- Kendra:** Empty Field
  - Outdoor Toys

# Baseline Example

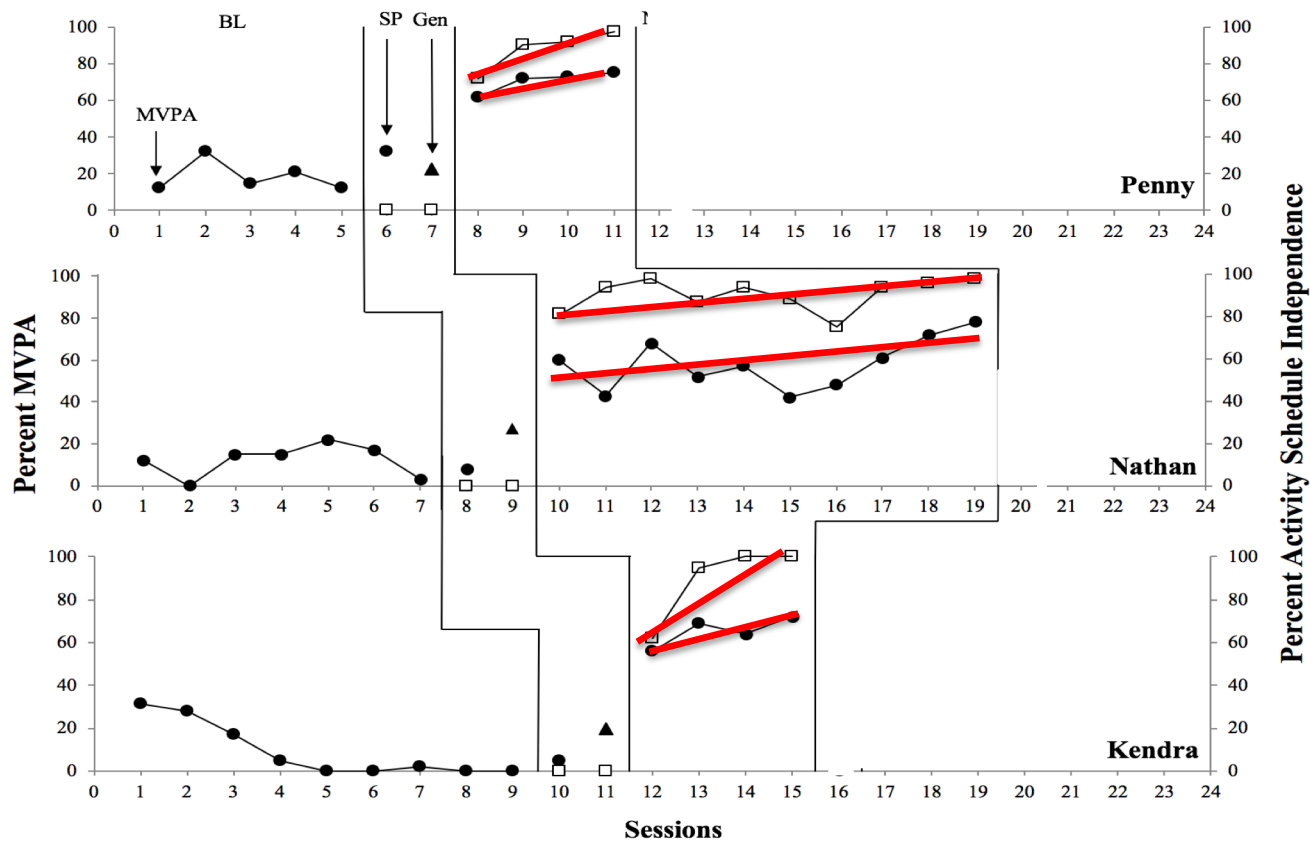




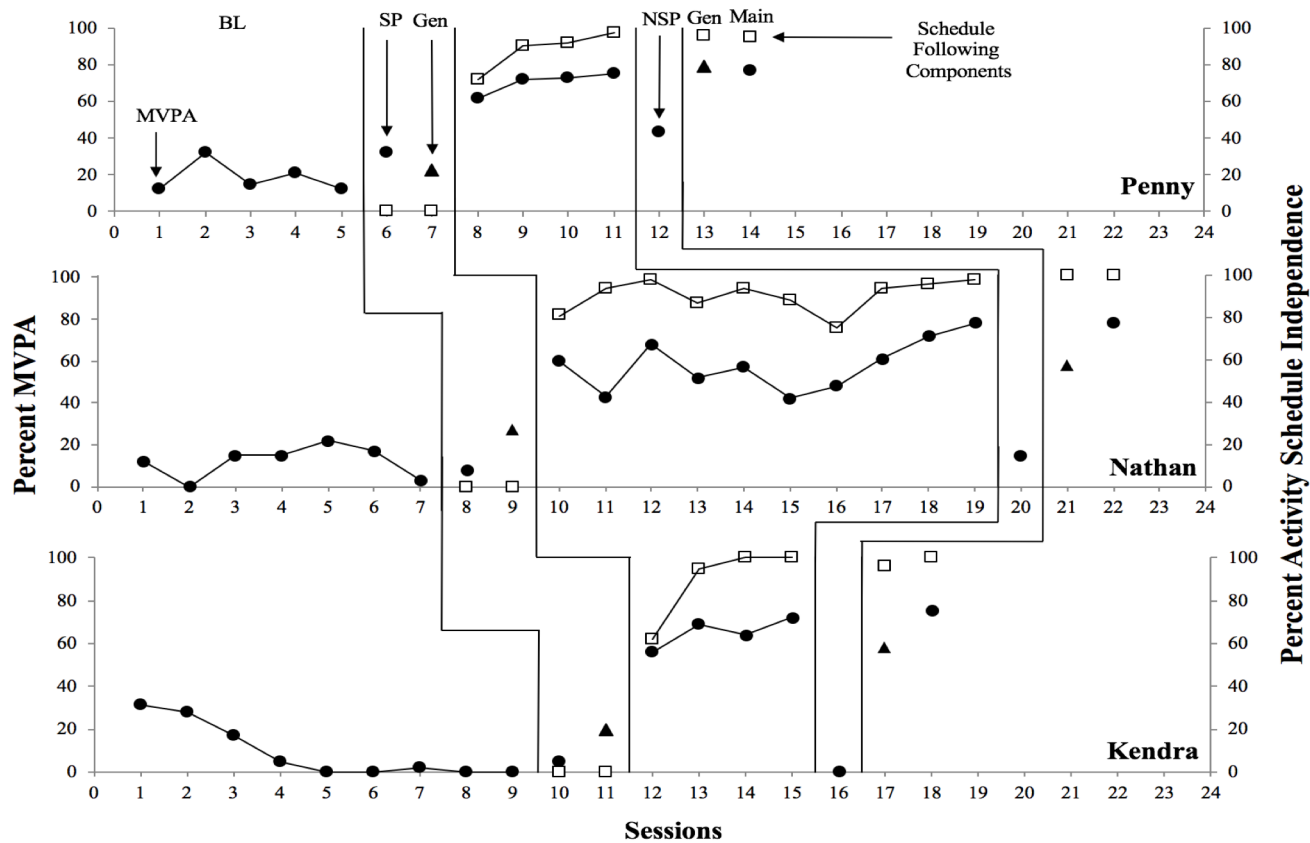
# Activity Schedule Results



# Activity Schedule Results



# Activity Schedule Results





# Video Example



# Discussion

Varying levels of MVPA evoked during context assessments across conditions for all participants.

Increase in MVPA after activity schedules were implemented

Increase the number of different activities completed

Future Research

Appropriate social activities