

Promising Practice: Accessing Independent Leisure and Social Skills for Adolescents on the Autism Spectrum

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Learning Outcomes

- *Identify 2 assessment strategies for adolescents with autism spectrum disorders*
- *Describe 5 evidence-based interventions that can be implemented with adolescents on the autism spectrum.*
- *List 4 essential programmatic aspects for improving self-efficacy and social skills.*

What is the need?

- What the current research reveals about the need
 - independence and self-management in community living
- The focus of the problem according to DSM V
 - The use of recreational interventions to improve functioning in the area of social skills and behaviors that support independence in community life

The Need for Transition

- Postsecondary Education
- Employment
- Productive Engagement
in the community
- Social and Community Involvement



U.S. Dept of Education (2011).

National Longitudinal Transition Study

Key Needs-8 years after HS

- 94% were engaged in some type of employment or postsecondary education
- Only 52% were engaged in any extracurricular activity (volunteer, community groups, or lessons)
- Interventions are needed throughout lifespan (not just in high school)

U.S. Dept of Education (2011). *National Longitudinal Transition Study*.

ASD DSM V Communication

Persistent deficits in social communication and social interaction across multiple contexts

- social-emotional reciprocity
- abnormal social approach
- failure of normal back-and-forth conversation
- reduced sharing of interests, emotions, or affect;
- failure to initiate or respond to social interactions.



APA (2013)

ASD DSM V Communication

Deficits in nonverbal communicative behaviors used for social interaction

- poorly integrated verbal and nonverbal communication
- abnormalities in eye contact and body language
- deficits in understanding and use of nonverbal communication

APA (2013)

ASD DSM V

Deficits in developing, maintaining, and understanding relationships

- difficulties adjusting behavior to suit various social contexts;
- difficulties in sharing imaginative play or in making friends;

APA (2013).

ASD DSM V Behavior

Restricted, repetitive patterns of behavior, interests, or activities

- Stereotyped or repetitive motor movements
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns.
- Highly restricted, fixated interests
- Hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment

Evidence-based Interventions for Young Adults with ASD

5 Types of Interventions

- Adaptive- Life skills Interventions
- Behavioral- Intensive social skills, peer-focused
- Educational- Cognitive skills
- Vocational- Job skills, vocational rehab
- Allied Health- Recreational therapy, Music therapy

AHRQ (2012). Comparative Effectiveness Research Review

DSM Problem Area & Intervention

Problem	Intervention
Deficits in social communication and social interaction	Authentic environment decreases stress
social-emotional reciprocity	Peer-mentoring in group-neurotypical buddy; communication with animal as stepping stone
Back and forth conversation	Reader's Theatre Social Dance; Physical Activity
Share interests, emotions, affect	Social Engagement games Art expression Music expression Challenge-Outdoor pursuits

DSM Problem Area & Intervention

Problem	Intervention
Deficits in nonverbal communication	Physical Activity (cross-country, swimming, hiking) allows for natural modeling/stress-reduction with MVintensity
Deficits in understanding, maintaining relationships	Peer-Mediated Instruction Buddy is a constant with Unconditional positive regard
Restrictive Repetitive Behavior	Introducing new leisure interests Archery, horseback riding, sport, Fishing that can continue at home
	Introducing job skills Childcare, Garden, Helping Hands

Promising Practices

- Assessment
- Planning-structure/framework
- Implementation- facilitation strategies
- Evaluation



Assessment

- Interview with parent /guardian
- Parent complete home/community based behaviors
- Observation-Interview Community Skills Assessment
- Other measures: Knowledge of Social Skills; Self-Efficacy

Interview with Parent/Screen

- Strengths
- Passions/ focal point
- Areas for growth/IEP goals
- Fears/Stressors
- Best way to calm anxiety/coping strategies
- Diet/Meds/ADLS

Parent Report Measures

Home & Community Social Behavior Scales HCSBS TRAINING FORM

To Be Completed by Parent, Guardian, or Supervisor of Children or Adolescents Ages 5-18

Identifying Information

Name of child or adolescent: _____

School: _____

Grade: _____ Age: years _____ months _____ Sex: male female

Name of person completing form: _____

Date form completed: _____

Relationship of rater to child/adolescent: _____

List the settings in which you observe or interact with this child or adolescent: _____

Self-Report Youth

Community-based Skills Assessment (CSA): Developing a Personalized Transition Plan

- Functional skills observation at home, school, work
- Functional skills interview
- Each section includes a focus on leisure/recreation

Community-Based Skills Assessment

- assessment tools developed for Autism Speaks through Virginia Commonwealth University's Rehabilitation Research and Training Center. Available on www.autismspeaks.org



Youth

- Test of Adolescent Social Skills Knowledge (TASSK)
 - Frankel, Erhardt, Renenger, & Pataki (2009)
- Self-efficacy for physical activity



Promising Practices

- Assessment
- Planning-structure/framework
- Implementation- facilitation strategies
- Evaluation



Planning 2 Programs

The RT transition program is delivered in 2 different structures

- After school Service-Learning
 - TRAILS(Therapeutic Recreation: Accessing Independent Leisure and Social Skills)
- Extended School Year
 - Camp R.O.C.K. (Recreational Opportunities Connecting Kids)

Camp ROCK Extended School Year Reverse Inclusion

Recreational Opportunities Connecting Kids

- 27 adolescents with autism
- 27 high school peers
- 15 university students
- Reverse-Inclusion
- Extended-school year program to address IEP goals



TRAILS: Accessing Independent Leisure and Social Skills

- Service-learning Program
- 1:1 student to participant ratio

Interventions

- Gardening:
 - Job skills/healthy eating
- Community life skills:
 - Decision-making/ money manage
- Theatre:
 - reading and critical thinking skills
- Music and Fine Art:
 - Expression and social skills



Promising Practices

- Assessment
- Planning-structure/framework
- **Implementation- facilitation strategies**
- Evaluation

Evidence-Based Facilitation Techniques

- Social Narrative
- Self-management training
- Prompting
- Reinforcement
- Social skills training



Evidence-based Facilitation

- Modeling
 - Peer or Video modeling
- Peer-mediated instruction
- Scripting
 - Providing a script for what you should do

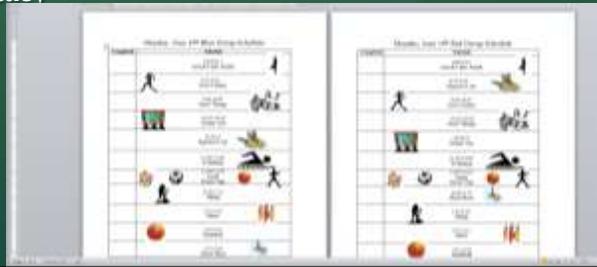


EBP Self-management

- Review goals with them at end of day –did they meet them?
- Reinforcement or reminders of goals
- Remembering care for own belongings
- Decrease prompts to help them be more independent with belongings
- Problem-solving – providing real world scenarios

EBP Scripting

- Providing an exact script for what you should say or do
- Visual Schedules are really important
 - Decreases anxiety of what is coming next
 - Provides a sense of control
 - Promotes self-efficacy



EBP Modeling

- Part of every activity no matter what modality
- Visually model what you want them to do
- Visually communicate the steps
- May not be able to process verbal instructions

EBP Peer Mediated Instruction

- Peers model appropriate social skills
- Peers promote confidence because they model it can be completed.
- Peers reinforce opportunities for interaction.

EBP Prompting and Reinforcement

- Visual cue, verbal cue, hand over hand, physical assist
- Reinforcement- positive response based on their area of passion/interest
- Premack principle or If/Then
 - "10 minutes, then a break"

EBP Social Narrative

- short social story provides an explanation of what to expect
- A social story does not just list tasks--- it suggests ways that they can interact with their friend during the activity

EBP Visual Modeling

- Video what is expected
- Allows participant to use a modality that they enjoy to see appropriate communication and movement
- Allows participant to mimic what they have seen on the video

EBP Social Skills training

- Initiating greetings
- Reciprocal conversations
- Asking someone about their interests
- What to do if ...
- Practice in authentic situations

Evaluation Multiple levels

- Peer or Student "buddy"
- Outside observers to note goal attainment
- Comparison of pre and post measures
- Three month post parent survey

Outcomes Evaluation of ESY

Four months post ESY

significant  confidence

in daily living skills scale ($p < .05$)

Confidence In	Pre	Post
Dressing	3.7	4.2
Bathing	3.2	3.3
Food Prep	2.3	2.9
Home Interactions	4.15	4.3
School Interactions	3.3	3.6

Outcome Evaluation of ESY

Four months post ESY

Significant  in community physical activity participation ($p < .05$)

Physical Activity Location	Pre	Post
Community Recreation (per day)	1.8	2.1
Play with friends (per day)	1.35	1.64
Sports teams (per year)	1.57	1.71

Qualitative Findings

What changes have you seen since camp?

(parents' perception)

- More willing to try new community activities
- More confidence with physical activities
- Better social interactions
 - "a little more social"
 - "more discussion about experiences"
 - "More willing to try leisure activities with family"
- More independent
- Less depressed and isolated

Outcomes for Mentors

Knowledge or Skill	P value for difference Pre to Post
Neuro-developmental Sequencing	p<.02
Transition Statements	p<.02
Using positive reinforcement	p<.04
Visual prompts (gestures)	p <.01
Visual strategies (pictures/iPad)	p <.02
Allowing for choice and independence	p <.02
Assuming independence rather than impairment	p<.02

TRAILS: Comparative Effectiveness Research

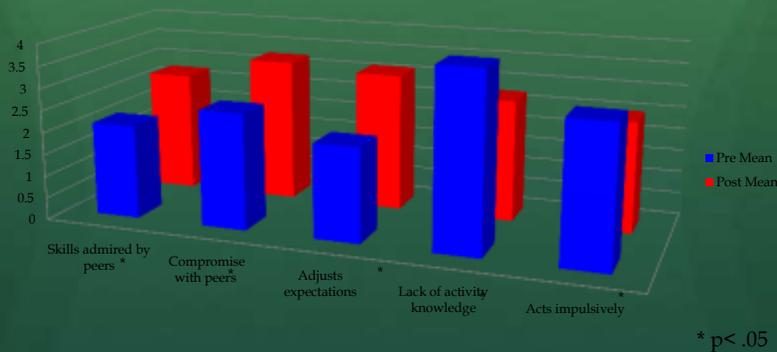
Compared to a general activity group, students on the autism spectrum who had recreational therapy significantly improved in

six areas over time ($p < .05$)

- Admiration by peers
- Compromise with peers
- Adjusting to expectations
- Decrease in impulsive behavior
- Improved overall social competence score
- Improved self-efficacy in terms of knowledge of recreational opportunities

Outcomes of Recreational Therapy

Before and After Comparison of Recreational Therapy Group



Observational Data

- Observational data (OARS) revealed a significant difference in the *responsiveness to mentor* over time. Based on the repeated measures ANOVA, the areas of significant difference ($p < .05$) between the two groups (those who received recreational therapy and those who did not) include:
- perceiving physical activity as fun and enjoyable, knowledge of activity, increased mood, and fears of sweat/strain during activity.

Take-Aways

- Based on the outcomes of this preliminary research, individualized goal-directed recreational therapy appears to be more effective in targeting specific social skills than a general activity program. Recreational therapy may impact outcomes through more intentional targeting of goals to help the youth's confidence and self-efficacy.

Questions?

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