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


*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)


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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Intervention</th>
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</thead>
<tbody>
<tr>
<td>Deficits in social communication and social interaction</td>
<td>Authentic environment decreases stress</td>
</tr>
<tr>
<td>Deficits in social-emotional reciprocity</td>
<td>Peer-mentoring in group-neurotypical buddy; communication with animal as stepping stone</td>
</tr>
<tr>
<td>Back and forth conversation</td>
<td>Reader’s Theatre, Social Dance; Physical Activity</td>
</tr>
<tr>
<td>Share interests, emotions, affect</td>
<td>Social Engagement games, Art expression, Music expression, Challenge-Outdoor pursuits</td>
</tr>
<tr>
<td>Deficits in nonverbal communication</td>
<td>Physical Activity (cross-country, swimming, hiking) allows for natural modeling/stress-reduction with MVintensity</td>
</tr>
<tr>
<td>Deficits in understanding, maintaining relationships</td>
<td>Peer-Mediated Instruction, Buddy is a constant with Unconditional positive regard</td>
</tr>
<tr>
<td>Restrictive Repetitive Behavior</td>
<td>Introducing new leisure interests, Archery, horseback riding, sport, Fishing that can continue at home</td>
</tr>
<tr>
<td></td>
<td>Introducing job skills, Childcare, Garden, Helping Hands</td>
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</table>
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
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
Interventions

- Physical activity/sports to develop life skills
- Equine-assisted activities
- Challenge activities: rock climbing/high ropes
- Water safety/Swim skills
- Art/Photography: expression decision-making

Individualized Goals and Objectives

Based upon the assessment, take into consideration the individual’s present level of ability and the future goals-relate to overall IEP
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)

<table>
<thead>
<tr>
<th>Confidence In</th>
<th>Pre</th>
<th>Post</th>
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</thead>
<tbody>
<tr>
<td>Dressing</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Bathing</td>
<td>3.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Food Prep</td>
<td>2.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Home Interactions</td>
<td>4.15</td>
<td>4.3</td>
</tr>
<tr>
<td>School Interactions</td>
<td>3.3</td>
<td>3.6</td>
</tr>
</tbody>
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Outcome Evaluation of ESY

Four months post ESY

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

<table>
<thead>
<tr>
<th>Physical Activity Location</th>
<th>Pre</th>
<th>Post</th>
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<tbody>
<tr>
<td>Community Recreation (per day)</td>
<td>1.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Play with friends (per day)</td>
<td>1.35</td>
<td>1.64</td>
</tr>
<tr>
<td>Sports teams (per year)</td>
<td>1.57</td>
<td>1.71</td>
</tr>
</tbody>
</table>
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

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

* p< .05
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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References


References


U.S. Department of Education (2011). *Post High School Outcomes of Young Adults with Disabilities up to 8 years*. Institute of Education Sciences publication.