Learning Outcomes

Participants will be able to:

1. Describe the DSM V criteria related to ASD
2. List specific strengths and problem areas for adolescents with autism
3. Explain the significant aspects of assessment and planning for evidenced-based practice.
4. Discuss both formative and summative evaluation of the process.

Overview of Webinar

- How do we define Autism based on DSM V?
- What are particular outcomes can RT address?
- Assessment
- Planning-structure/framework
- Implementation-facilitation strategies
- Evaluation
Autism Spectrum Disorders DSM V

2 main areas of focus
- Communication & Social Interaction
- Behavior

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)
Autism Spectrum Disorder 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, use of objects, or speech
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior.
- Highly restricted, fixated interests that are abnormal in intensity or focus
- Hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment

Classification and Severity

Severity is based on social communication impairments and restricted repetitive patterns of behavior
- Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
- Level 1, 2, 3—based upon the support needed to function
The Need for Transition

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


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)


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
Best Practice for Transition

- Individual goal-directed
- Peer modeling
- Combine evidence-based strategies
- Focus on specific outcomes

What RT Outcomes?

- Emotional Well-being
  - Stress-reduction
  - Self-management and efficacy
- Communication
  - Ability to express wants, needs, choices, feelings, ideas
- Social Interaction Patterns
  - Skills needed to interact with others

What RT Outcomes?

- Joint attention
  - Behaviors needed for sharing interests or experiences
- Cognitive
  - Problem-solving/decision-making
  - Attention to task
  - Reasoning
  - Executive function
What RT outcomes?

- Independent Living skills
  - Adaptive or life skills
  - ADLS
- Vocational
  - Readiness for employment—skills needed
- Motor
  - Related to sensory integration
  - Fine and gross motor skills

Overview of Webinar

- What is the need?
- What outcomes can TR address?
- 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

- Parent Report Measures
  - Merrell (2002). HCSBS

Self-Report Youth

- Self-Report Youth
  - Community-based Skills Assessment (CSA):
    Developing a Personalized Transition Plan
  - Each section includes a focus on leisure/recreation
Community-Based Skills Assessment

- Assessment tools developed for Autism Speaks through a contract with 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

Overview of Webinar

- What is the need?
- What outcomes can RT address?
- 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
- Community life skills:
  - Decision-making/money
- Theatre:
  - Reading and critical thinking skills
- Music therapy:
  - Expression and social skills

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

DSM Problem Area & Intervention

<table>
<thead>
<tr>
<th>Problem</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficits in social communication and social interaction</td>
<td>Authentic environment decreases stress</td>
</tr>
<tr>
<td>Social-emotional reciprocity</td>
<td>Peer-mentoring in group-neurotypical buddy</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>
</tbody>
</table>
DSM Problem Area & Intervention

<table>
<thead>
<tr>
<th>Problem</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficits in nonverbal communication</td>
<td>Physical Activity (cross-country, swimming, hiking) allows for natural modeling/stress-reduction with MV intensity</td>
</tr>
<tr>
<td>Deficits in understanding, maintaining relationships</td>
<td>Buddy is a constant Unconditional positive regard</td>
</tr>
<tr>
<td>Restrictive Repetitive Behavior</td>
<td>Introducing new leisure interests Archery, horseback riding, sport, Fishing that can continue after</td>
</tr>
<tr>
<td></td>
<td>Introducing job skills Childcare, Garden, Heavy Lifters</td>
</tr>
</tbody>
</table>

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

Overview of Webinar

- What is the need?
- What outcomes can RT address?
- Assessment
- Planning-structure/framework
- Implementation- facilitation strategies
- Evaluation
Implementation

- Facilitation techniques that are used throughout the interventions

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 to pick up towels, sunscreen
- Decrease prompts to help them be more independent with belongings

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 they don’t respond as you expect
- Practice in authentic situations

Overview of Webinar

- What is the need?
- What outcomes can it address?
- Assessment
- Planning-structure/framework
- Implementation-facilitation strategies
- Evaluation
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

<table>
<thead>
<tr>
<th>Confidence in</th>
<th>Pre</th>
<th>Post</th>
</tr>
</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>3.5</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Outcome Evaluation of ESY

Four months post ESY

Significant in community physical activity participation

<table>
<thead>
<tr>
<th>Physical Activity Location</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<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>

Questions?

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724-738-4306
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.