

Updates on Current School Practices: Implications for School-Aged Students with Autism Spectrum Disorder

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Webinar



Learning Objectives

- Participants will increase knowledge of...
 - current school practices related to student achievement.
 - current evidence-based methods in autism spectrum disorder (ASD) intervention.
 - autism spectrum disorder and effect on school participation and engagement in learning.
 - the Multi-tiered Problem-solving Model (MTPS) applied in ASD assessment and intervention planning.

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Current School Practice

- 2009 Reform Initiatives: k-12
 - Improve student outcomes.***
 - Recruit, develop & retain quality teachers and administrators.
 - Identify and replicate effective school practices.
 - Data-driven instruction. ***
 - Identify learning and behavior problems early.
 - Assessment
 - Link assessment to intervention.
 - Resources allocated based on student assessment data.

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Current School Practice

- Literature shows a relationship between the instructional context and student achievement.
 - Contexts that promote student <u>participation</u> and <u>engagement</u> are associated with better student <u>achievement</u>.
- Two elements of an effective instructional context.
 - Effective Behavior Supports.
 - -Quality Instruction.

EVIDENCE-BASED METHODS IN ASD

Evidence-Based Intervention in ASD

- Primarily derived from learning theories and developmental models.
- Methods:
 - Antecedent-based Interventions
 - Visual Supports
 - Scheduling Systems
 - Reinforcement schedules.
 - Extinction
 - Response Interruption/Redirection

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Evidence-Based Intervention in ASD • Methods: - Discrete Trial Teaching - Direct Instruction - Task Analysis - Prompting & Fading - Structured Work Systems Modeling (video/peer) - Naturalistic Interventions - Pivotal Response Training Evidence-Based Intervention in ASD • Methods: - Cognitive-Behavioral Intervention - Self-Management - Social Skills Training Social Narrative - Functional Communication Training - Picture Exchange Communication System - Alternative & Augmentative Communication systems **ASD & LEARNING**

ASD & Learning

- ASD characteristics and related conditions can affect participation and engagement.
 - Social communication and interaction impairments.
 - Repetitive and restricted activities, interests, and behaviors.
 - Language disorders.
 - Intellectual and neurocognitive disabilities
 - Emotional and behavioral conditions.
 - Medical conditions and medication.
 - Sleep and eating problems.
 - Sensory processing problems.
 - Adaptive impairments.

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ASD & Learning

- Student may show...
 - Functional communication impairments.
 - May not seek out and ask for assistance, instead may 'act out' when frustrated, challenged, or upset.
 - Restricted & repetitive behavior, interests &
 - May prefer to engage in RRB instead of school work.
 - Academic learning problems.
 - Intellectual disability.
 - Scattered cognitive skills.
 - Specific learning disabilities.

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ASD & Learning

- Student may show...
 - Attention and concentration problems.
 - May be off task.
 - May have difficulty initiating & completing assignments.
 - Processing speed problems.
 - Difficulty combining information efficiently so may appear to be noncompliant.

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ASD & Learning

- Student may show...
 - Executive function problems.
 - Difficulty with planning, organizing and problem-solving.
 - Difficulty following classroom routine.
 - Working memory and other memory problems.
 - Difficulty remembering more than 1 or 2 things so may not be able to follow multi-step direction.

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ASD & Learning

- One or more of these difficulties can lead to...
 - NON-COMPLIANCE.
 - Passive
 - Active



- DISRUPTIVE BEHAVIORS.
 - Aggression (verbal, psychical)
 - Elopement.
 - Tantrum or meltdown.
 - Property destruction.
 - Repetitive behavior.



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ASD & Learning

If the instructional context is designed to support participation & engagement, then the student is more likely to learn and achieve.

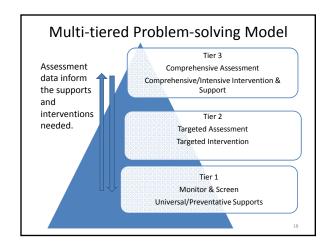


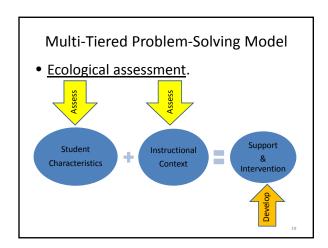
MULTI-TIERED PROBLEM-SOLVING MODEL

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Multi-Tiered Problem-Solving Model

- Problem-solving model used to improve <u>participation</u> and <u>engagement</u>.
 - Ecological framework.
 - Assessment data from student and context is used to inform support/intervention plan.
 - Prevention oriented.
 - Applies the problem-solving process: data-based decision making.
 - Problem Identification
 - Problem Analysis
 - Intervention Planning
 - Implementation
 - Evaluation





Ecological Assessment

Student

Stude

- ASD Characteristics.Developmental levels.
 - Cognitive
 - Academic
 - Language
 - Social
- MotorAdaptive
- Other Conditions.
 - Emotional
 - Behavioral
 - Medical

Context

- Behavior Support System (Classroom Management System).
 - Expectations.
 - Reinforcement System.
- Quality of Instruction.
 - Curriculums.
 - Methods, format, activities, pace.
 - Opportunities to respond (OTR)
 - Error Correction.
 - Evaluation system.

MTPS: Assessment

Determine if additional assessment is needed.

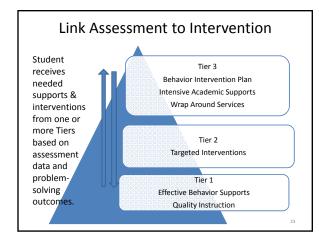
Tier 3
Comprehensive Assessment
Tier 2
Targeted Assessment

Tier 1
Monitor & Screen

Links Assessment to Intervention

- Use assessment data to identify the supports and interventions needed for improving student <u>participation</u> and engagement.
- Assessment data can also assist in determining if additional assessment may be needed.

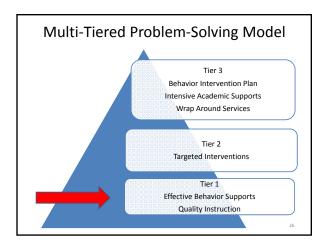
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Evaluate Student Response to Intervention

- Establish performance benchmarks.
 - Specific: based on the specific target behavior (s).
 - Global: based on global classroom functioning .
- On-going assessment of <u>student</u> <u>response</u> to supports/interventions
 - Problem-solve/adjust plan if not making progress.
 - May need additional assessment (targeted/comprehensive).

TIER 1 SUPPORTS: ASD UNIVERSAL SUPPORTS



Effective Behavior Supports

Classroom Management System
Communication Supports

Classroom Management System

- Establishes <u>expectations</u> for appropriate classroom participation.
- <u>Teaches</u> students the <u>prosocial skills</u> needed to meet the expectations.
- Reinforces students for displaying the prosocial skills & meeting expectations.
- Hierarchy of <u>corrective actions</u> to deal with disruptive behavior.

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Classroom Management System

- Developing an effective management system:
 - Behavioral Expectations (prosocial skills).
 - Posted and taught explicitly.
 - Reviewed, retaught, and error corrected throughout the day.
 - Differential Reinforcement of Appropriate Behavior (DRA) system.
 - High rates of reinforcement for meeting expectations/displaying prosocial behavior.
 - Gradient of corrective prompts for disruptive behavior.
 - Planned ignoring, proximity, corrective prompt, corrective prompt + model skill, corrective prompt + warning, corrective prompt + 'intervention'

Classroom Management System

- Regularly <u>evaluate the effectiveness</u> of the system on student behavior.
 - Specific: ABC Sheet or other direct observation data sheet.
 - Global: Classroom Survival Skills Checklist (Magyar 2006/2010).
- Problem-solve if ineffective.
 - Modify the system; and/or
 - Consider additional intervention (e.g., Tier 2) if the performance data indicate that a student is not responding.

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Additional Behavior Supports

- May need to consider establishing additional behavior supports.
 - Group Attending & Participation.
 - Follow similar steps....
 - Define and teach skills.
 - Establish a <u>reinforcement</u> system to strengthen each skill.
 - Evaluate student response.
 - Other classroom participation skills may need to be taught.
 - Tier 1 & 2

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Communication Supports

Communication Supports

- Social & functional communication supports will often be needed to...
 - Improve <u>participation</u> and <u>engagement</u>.
 - Prevent <u>disruptive</u> behaviors.
 - Many disruptive behaviors are related to poor communication skills.
- May also require <u>targeted intervention</u> (Tier 2) and some may require <u>intensive</u> <u>intervention</u> and support (Tier 3).

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Communication Supports

- Multiple strategies can be used in the classroom (Tier 1).
 - Inquiry.
 - Model prompt.
 - Communication scripts or other visual communication supports.
 - Augmentative or alternative communication system.
 - Consultation and coaching from related service personnel (e.g., speech-language, social work) for student-specific support strategies.

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Quality Instruction

Scheduling Systems Visual Supports Instructional Supports

Quality Instruction

- Various ASD supports can enhance the effectiveness of instruction for students.
 - Use of Effective Behavior Supports.
 - Use of Scheduling Systems
 - Use of Visual Support Systems
 - Instructional Supports & Modifications.
- All can contribute to increasing student participation and engagement.

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Schedules

Scheduling Systems

Schedules

- Schedules establish routines and assist with student <u>participation</u> and <u>engagement</u>.
- Multiple types of schedules.
 - Classroom Schedule.
 - Sequence of activities in the day.
 - Student Specific Schedule.
 - Sequence of activities specific to the student's day (full or part).
 - Activity Schedule:
 - Sequence/steps to a specific routine, activity, and task.

Schedules

- Steps to developing a schedule.
 - Assess student learner characteristics.
 - Developmental level, visual discrimination skills, attention, motor ability.
 - Assess prerequisite skills.
 - Matching and discrimination.
 - Task analyze the routine, activity, and task.
 - Align with student learner characteristics.

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Schedules

- Steps to developing a schedule.
 - Determine the form of the schedule.
 - Object, picture, symbol, written, combination.
 - Determine the format of the schedule.
 - Vertical, horizontal; single, double, multiple; size.
 - Determine the location for the schedule.
 - Ease of use.

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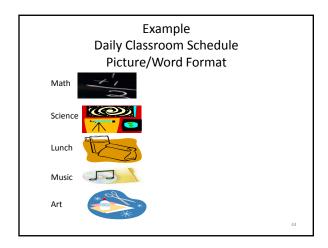
Schedules

- Steps to developing a schedule.
 - Evaluate the student's level of independence.
 - Assess level of assistance needed.
 - Teach the student to use the schedule independently.
 - Initial Teaching
 - -Verbal instruction with prompt & fade.
 - Maintenance
 - -Shadow & graduate guidance.

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Example Daily Classroom Schedule Picture Format





Example Daily Classroom Schedule Written Format

- 9:05-9:45 PE
- 10:00-10:30 Math
- 10:30-11:30 Writing
- 11:30-12:00 Lunch
- 12:00-12:45 Science
- 12:45-2:00 Reading
- 2:05-3:00 Math
- 3:00-3:30 Recess

Example: Student
Specific Schedule

8:45-9:00-morning routine
9:00-10:00-SPECTAL

10:00-10:30-8. D, F-adoptive P,E.
10:30-10:30-8. B, science (Ms. Smith) D,F- social
studies (Mrs. Boucher)
10:05-10:30/4 / C-science (Ms. Smith) E- social studies
(Mrs. Rex)
10:45-10:55/ sensory break
10:55-11:25/ LUNCH
11:30-12:00 F/ counseling with Ms. Cole
11:30-12:00 F/ counselin

Example: Activity Schedule







- Put name on paper
- Read direction
- Answer questions
- Raise hand
- Show teacher
- Hand in assignment

Example: Activity Schedule







- Hand up coat
- Empty Backpack
- Put School-Home Notebook in Bin
- Put Homework in Bin
- Go to your desk

Learn More!

- To view a self-guided training module on Daily Visual Schedules developed by the RRCASD and to download the training guide, visit the following website.
 - https://www.urmc.rochester.edu/childrenshospital/developmentaldisabilities/RRCASD/Rochester-Regional-Centerfor-Autism-Spectrum-Diso.aspx

Visual Supports

Organization
Clarity
Instruction

Visual Supports

- Visual supports can be used to....
 - assist with independent and appropriate classroom participation.
 - Prompts specific skills or behaviors needed to complete a routine, activity, and task.
 - direct student <u>attention</u> to relevant stimuli or parts of a routine, activity, task, or situation to improve <u>engagement</u>.

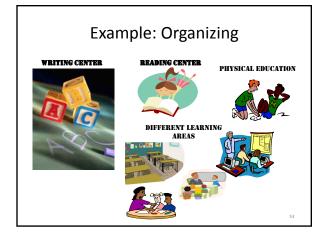
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Visual Supports

- Visual supports...
 - Organize the environment around specific learning objectives, routines, activities, tasks.
 - Clarify specific steps of a routine, activity, or task, and/or a behavior needed for participation.
 - Instruct the student on a routine, activity, or task by providing a model and/or task list/activity schedule.

Visual Supports

- Visual supports include....
 - Spatial arrangements.
 - Physical, position, arrangement of materials.
 - Objects, photographs, pictures, symbols, written text, and combination of forms (e.g., photo/word).
 - Single.
 - Sets: sequences as in scheduling systems.
 - Added stimuli...
 - Color highlight.
 - Arrows (with and without text).
 - Underlines, brackets, circle.





Example: Clarifying

Mary had five apples and she gave John 2, how many apples did Mary have left?

Mary had <u>five</u> apples and she gave John <u>2</u>, how many apples did Mary have <u>left</u>?

Mary had FIVE apples and she gave John TWO, how many apples did Mary have LEFT?

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Examples: Instructing









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Example: Instructing

Ask for Help Sit

Ask Question Look

Wait Turn Listen

Raise Hand

Learn More!

- To learn more about the use of visual supports in ASD, visit the Autism Speaks website and download the Visual Supports Toolkit.
 - http://www.autismspeaks.org/science/resourcesprograms/autism-treatment-network/tools-youcan-use/visual-supports

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Instructional Supports

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Instructional Supports

- Components of Quality Instruction.
 - Use of effective Behavior Supports.
 - Minimizes disruptive behaviors and improves participation and readiness for learning.
 - Use of instructional supports to enhance participation and engagement.
 - Schedule and visual systems.
 - Alignment of the instruction with the student's instructional level.
 - Continuous assessment.
 - Evidence-based curriculum.
 - $\bullet \ \, \text{Evidenced-based instructional methods}. \\$

Instructional Supports

- Components of Quality Instruction.
 - High rate of Opportunities to Respond (OTR).
 - 4-6 per min for new information/9-12 per min for rehearsal.
 - High ratio of Correct to Incorrect responding.
 - Approximately 4:1 (or 80% accuracy).
 - Effective Error Correction strategies.
 - · Errorless learning.
 - Use of effective prompting methods.

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Instructional Supports

- In addition to universal Tier 1, determine what supports are needed for specific *instructional* sessions/learning objectives.
 - Be familiar with the <u>curriculums</u> you are using.
 - Be familiar with the student's <u>learner</u> <u>characteristics</u>.
 - Assess the student in each of the identified curriculums to ascertain <u>instructional levels</u> for each.
 - Assess the student's <u>motivational</u> level to identify needed <u>behavior supports</u>.

Instructional Supports

- Common supports include...
 - Modifying the level of difficulty.
 - Should be at the student's instructional level.
 - Determined through curriculum-based assessment.
 - Modifying the amount of information presented.
 - Less may be more!
 - Space out the amount of work to be completed across several practice sessions.

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Instructional Supports

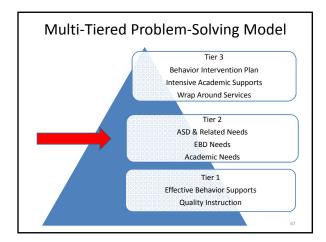
- Common supports include...
 - Selecting an instructional format that maximizes engagement...Differentiating Instruction.
 - Visual, auditory, multi-sensory, technology.
 - Group (small, large, cooperative), individual, community-based, independent.
 - Selecting activities & materials that maximize student interest and therefore, engagement.
 - Spatial arrangement; hands-on activity; paperpencil; technology.
 - Student interest.

Instructional Supports

- Common supports include....
 - Creating multiple opportunities for learning through linkage with other content areas and learning objectives/goals.
 - Implementing a reinforcement system to increase learning and engagement (via increasing motivation to engage).
 - Modifying the required student response.
 - Multiple response formats should be considered, depending on student learner characteristics.
 - Point, write, speak, draw, type etc.
 - Use (assistive) technology.

TIER 2: TARGETED INTERVENTIONS

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Tier 2 Targeted Interventions

- Common targeted interventions for students with ASD:
 - Functional Communication.
 - Social Skills.
 - Emotional & Behavioral Self-Regulation.
 - Academic Intervention for specific content areas.

Tier 2 Targeted Interventions

Functional Communication

- Direct Instruction.
- Discrete Trial Teaching.
- Verbal Behavior training.
- Naturalistic Interventions.
- Picture Exchange Communication Systems. • Pivotal Response Training.
- Augmentative/Alternative Naturalistic Interventions. Communication.

Social Skills

- Social Skills Training: Direct Instruction.
- Social Narratives.
- Social Scripts.
- Peer/Video Modeling.

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Tier 2 Targeted Interventions

Emotional-Behavioral Self-Regulation

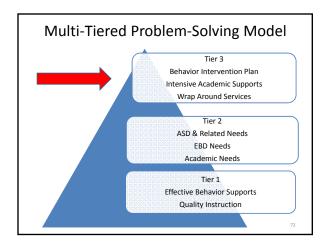
- Cognitive Behavioral Intervention
 - Coping and problemsolving.
- Self-Management Training.

Academic Intervention

- Direct Instruction (explicit instruction).
- Discrete Trial Teaching.
- Task Analysis.
- Structured Work Systems.

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TIER 3: INTENSIVE INTERVENTION & SUPPORTS



Tier 3: Intensive Intervention & Support

- Common interventions and supports for students with ASD:
 - Behavior Intervention Plan (BIP).
 - Based on Functional Behavioral Assessment.
 - Intensive Academic Support.
 - Parallel curriculum.
 - Individualized instruction.
 - More restrictive program placement.

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Tier 3: Intensive Intervention & Support

- Common interventions and supports for students with ASD:
 - Wrap Around Services: Community-based interventions.
 - -Psychological.
 - P sychiatric.
 - -Home-based behavior support.
 - Residential Habilitation.
 - -Crisis Support Services.
 - -Service Coordination.
 - -Parent Education.

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Evaluating Student Response to Intervention

Team Problem-solving

Evaluation

- An interdisciplinary team approach is used in the MTPS model.
 - School-Home-Community Collaborative Model.
- Team applies a problem-solving framework to identify and solve student learning and behavioral difficulties.
 - Use ecological assessment data to guide decisions about.....
 - student support and intervention needs.
 - adjustments, modifications, and enhancements to the classroom or other instructional contexts that are needed to support student participation and engagement.
 - continuous assessment.

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Problem Solving

- The steps to problem solving include:
 - Problem Identification.
 - Define and measureable.
 - Problem Analysis.
 - · Collect data.
 - Antecedents/root cause.
 - Consequences/maintaining variables.
 - Identify possible setting events (motivation.)
 - Plan Intervention(s).
 - What resources are needed?
 - How will resources be allocated?
 - Will there need to be additional assessment?

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Problem-Solving

- Implement Intervention(s).
 - Ensure integrity of implementation.
- Evaluate outcome.
 - Did it work?
 - -Any negative collateral effects?
 - Will intervention(s) maintain improvement in the long run?
 - Complete any additional assessment that was recommended.
 - Revise intervention plan as appropriate.

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CASE EXAMPLE

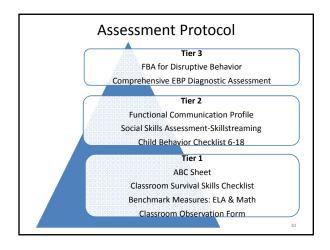
Case Example

- Description.
 - 12-year-old girl with ASD (dx age 9).
 - Language/Communication: verbal, poor functional communication.
 - Cognitive: average ability, but wide scatter.
 - Academic: below performance benchmarks in ELA & Math.
 - Social-Emotional: social skill impairments; disruptive behavior (occasional verbal refusal, occasional property destruction and physical aggression).
 - Placement: general education classroom-1st year in middle school. Has 504 Plan.

Student requires Comprehensive assessment.

Tier 3
FBA for Disruptive Behavior
Diagnostic Assessment for EBP
Tier 2
Targeted Assessment for ASD, EBP & Academic Problems

Tier 1
Screening for Learning & Social-Emotional/Behavior Problems (EBP)



Assessment Linked to Intervention: Support & Intervention Plan Schedule & visual support systems. Social & functional communication supports (scripts/peer models). Tier 1 Academic modifications & differentiated Classroom management system • Targeted intervention: ASD impairments (SLP-communication, social). Tier 2 • Targeted intervention: Disruptive Behavior(Counseling-coping/problemsolving). • AIS for ELA & Math. • Behavior Intervention Plan (BIP). Community Psychotherapy & Psychiatric-EBP. Tier 3 • Residential Habilitation Services.

RESOURCES 84

Resources

• Federal Education

- For information on national k-12 school reform visit
 - https://www.ed.gov/k-12reforms
- For more information about the National Common Core State Standards Initiative visit
 - http://www.corestandards.org/

State Education

- For more information about NYS Race to the Top, visit
 - http://www.engageny.org/
- For more information on the NYS Common Core Learning Standards, visit
 - http://www.p12.nysed.gov/ciai/common core standards/.

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Resources

• Autism Spectrum Disorder

- Magyar, C.I. (2011). Developing and evaluating educational programs for students with autism. Springer Publisher: NY.
- Magyar, C.I., & Pandolfi, V. (2012). Considerations for establishing a multi-tiered problem-solving model for students with autism and emotional-behavioral disorders. Psychology in the Schools, Special Edition, 49, 975-987.
- Wong, C., Odom, S. L.,... Schultz, T. R. (2013). Evidence-based practices for children, youth, and young adults with Autism Spectrum Disorder. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice Review Group. Available online at

Available online at http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/2014-EBP-Report.pdf

Resources

- Rochester Regional Center for Autism Spectrum Disorder (RRCASD).
 - On-line educational resources, webinars, Information & Referral services.
 - Contact information:
 - Website: www.golisano.urmc.edu/rrcasd-nyautism
 - E-mail: rrcasd@urmc.rochester.edu
 - Tele: 1-855-508-8485
- Autism Speaks: website: www.autismspeaks.org
 - This site contains various toolkits and guides for home, school, work, safety, health/medical, etc.

Question & Answer A Webinar Evaluation Survey will be sent to your e-mail. Please complete to receive a Certificate of Attendance.