## Autism Spectrum Disorders

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## Autism Spectrum Disorders



Autistic Disorder    Asperger's Disorder    Childhood Disintegrative Disorder    Rett's Disorder

Pervasive Developmental Disorder - Not Otherwise Specified

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## Facts about Autism Spectrum Disorders

- According to the Centers for Disease Control, the incidence rate for autism spectrum disorders is now as high as 1 in 110, including 1 in 70 boys.

- Prognosis varies depending on the timing and quality of intervention

- Still, only 2.59% of children under age three are being served through the federally-funded Early Intervention program, which is designed to mitigate developmental delays and disorders

- Scientific studies have demonstrated that early intensive behavioral intervention improves learning, communication and social skills in young children with autism

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## Autistic Disorder

- Often parents will notice that their young children is showing unusual behaviors such as failing to make eye contact, not responding to his or her name or playing with toys in unusual, repetitive ways.

- A diagnosis per the DSM IV involves validation of 6 or more of the 12 listed symptoms, with two being impaired social interactions and one impaired communication, and one being a restricted repertoire of activities and interests.

- Symptoms can vary along a continuum from completely non-verbal, to two-way communication, however the communication is mostly one sided. As a spectrum disorder, the level of developmental delay is unique to each individual.

- Children with autism are frequently seen as aloof and uninterested in others

- A diagnosis per the DSM IV involves validation of 6 or more of the 12 listed symptoms, with two being impaired social interactions and one impaired communication, and one being a restricted repertoire of activities and interests.

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## Asperger's Disorder

- Severe and sustained impairment in social interaction and the development of restricted, repetitive patterns of behavior, interest, and activity

- The disturbance must clinically show significant impairment in social, occupational, and other important areas of functioning

- In contrast to Autistic Disorder there is no delay in language

- There are still many professionals who consider Asperger's Disorder a less severe form of autism

- Individuals with Asperger's Disorder usually want to fit in and have interaction with others; they simply don't know how to do it. They may be socially awkward, not understanding of conventional social rules, or show a lack of empathy. They may have limited eye contact, seem to be unengaged in a conversation, and not understand the use of gestures.

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## Rett's Disorder

- Caused by mutations on the X chromosome on a gene called MECP2

- Developmental disorder, not a degenerative disorder

- Causes problems in brain function that are responsible for cognitive, sensory, emotional, motor and autonomic function. These can include learning, speech, sensory sensations, mood, movement, breathing, cardiac function, and even chewing, swallowing, and digestion

- Symptoms appear after an early period of apparently normal or near normal development until six to eighteen months of life, when there is a slowing down or stagnation of skills. A period of regression then follows when she loses communication skills and purposeful use of her hands

- It is confirmed with a blood test that checks for MECP2 gene

- The child may experience difficulties with gait, hand movements, diminished cognitive abilities. Classroom support could span from support to SDC classroom with OT, and one-to-one depending on the severity of symptoms.

- **THE RETT SYNDROME HANDBOOK (Second Edition) is a good book for educators**

## Childhood Disintegrative Disorder

- Childhood disintegrative disorder is a condition in which children develop normally through age 3 or 4. Then, over a few months, children lose language, motor, social, and other skills that they already learned.

- The cause of childhood disintegrative disorder is unknown, but it has been linked to brain and nervous system problems. A child who is affected loses:

- Communication skills

- Nonverbal behaviors

- Skills they had already learned

## Childhood Disintegrative Disorder

- Unlike Rett's it is not linked to a gene

- Treatment protocol is the same for children with Autism. Prognosis is poor, by age 10 most children with this disorder have the same symptoms as children with severe autism

- Parents should contact their physician if their child begins to lose developmental milestones that were already obtained

## Pervasive Developmental Disorder PDD-NOS

- This area is reserved for children who experience difficulty in at least two of the three identified areas of Autistic Disorder but do not meet the complete diagnostic criteria

- Can be used when the diagnostician is hesitant to diagnose Autism

- Symptoms may be mild or focused in one particular area, such as social skills

- High functioning student as compared to students with a diagnosis of Autism

- School placement needs to be tailored to the child. A thorough assessment needs to be completed and services directed therein

## Autistic Spectrum Disorder
### DSM-5 Development, American Psychiatric Association

- Must meet criteria A, B, C, and D:

- A. Persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays, and manifest by all 3 of the following:

- 1. Deficits in social-emotional reciprocity; ranging from abnormal social approach and failure of normal back and forth conversation through reduced sharing of interests, emotions, and affect and response to total lack of initiation of social interaction,

- 2. Deficits in nonverbal communicative behaviors used for social interaction; ranging from poorly integrated- verbal and nonverbal communication, through abnormalities in eye contact and body-language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.

- 3. Deficits in developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers); ranging from difficulties adjusting behavior to suit different social contexts through difficulties in sharing imaginative play and in making friends to an apparent absence of interest in people

## Autistic Spectrum Disorder
### DSM-5 Development, American Psychiatric Association

- B. Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least two of the following:

- 1. Stereotyped or repetitive speech, motor movements, or use of objects; (such as simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases).

- 2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change; (such as motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes).

## Autistic Spectrum Disorder
### DSM-5 Development, American Psychiatric Association

3. Highly restricted, fixated interests that are abnormal in intensity or focus; (such as strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).

4. Hyper-or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment; (such as apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects).

C. Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities)

D. Symptoms together limit and impair everyday functioning.

## Identifying Autism, Diagnostic Assessment & Special Education Determination

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## + Assessment of Autism Spectrum Disorders

- Case Finding – monitoring the development of ALL students
  - Risk Factors
  - Warning Signs
  - Developmental Screening – Child Find
  - Staff Development
- Autism Screening
- Diagnostic Assessment and Psycho-educational Assessment

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## + Warning Signs
Absolute indicators of the need for an autism screening

- No big smiles or other joyful expressions by 6 months
- No back and forth sharing of sounds, smiles, or facial expressions by 9 months
- No back and forth gestures such as pointing, showing, reaching or waving bye bye by 12 months
- No babbling at 12 months
- No single words at 16 months
- No 2 word spontaneous (noncholalic) phrases by 24 months
- Failure to attend to human voice by 24 months
- Rarely sharing interests with others, limited social, verbal expression and social interactions by Middle Childhood
- Few friends, unusual affect, persistent and repetitive speech and/or behaviors and failure to understand social rules and conventions by Adolescence

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## + Developmental Screenings

Developmental screening techniques

- **The Ages and Stages Questionnaire**
- **The Child Development Inventories**
- **The Parents' Evaluation of Developmental Status**
- **Developmental Behavior Checklist**
- Staff Development
- Parental Concerns

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## + Autism Screening

- Screen ALL students at risk
- Lead Screening
- Audiological evaluations
- Behavioral Screenings

**CHecklist for Autism in Toddlers (CHAT) and M-CHAT**

**Pervasive Developmental Disorders Screening Test-II (PDDST-II)**
- 3 stages (15 min parent rating scale)
  - Stage 1 help determine if a given child should be evaluated for autism (used by school psychologist in general ed)
  - Stage 2 Discriminate between children with autism or related developmental disorders (language and ID)
  - Stage 3 Discriminate between Autistic Disorder and other ASD

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## + Autism Screening
### School Age Children

**The High Functioning Autism Spectrum Screening Questionnaire (ASSQ)**
- Checklist for parents and/or teachers
- ASSQ example items
  - This child stands out as different from other children of his/her age in the following ways:
    - Is old fashioned or precocious.      No  Somewhat  Yes
    - Has a different voice or speech
    - Lacks empathy
    - Has special routines: insists on no change
    - Has markedly unusual posture

## + Autism Screening

**Childhood Asperger Syndrome Test (CAST)**
- Is being developed as screening tool for general ed primary grades
- Rate of false positive is rather high (36.4)
- DO NOT use screening tool diagnostically

**Australian Scale for Asperger's Syndrome (A.S.A.S)**
- Parent and Teacher rating scale
- From Asperger's Syndrome: A Guide for Parents and Professionals by Tony Atwood (1998)

**Social Communication Questionnaire (SCQ)**
- Age 4 and older
- Two forms: Lifetime and a Current form
- 40 yes/no questions

## + Diagnostic Assessment

- Requires multiple methods employed across multiple settings by a multidisciplinary team

- One team member should coordinate the assessment

- Only school professionals with appropriate training and supervision should diagnose autism (see page 55, Table 5.1)

- IDEA determines special ed eligibility, judges often consider DSM IV-TR diagnostic criteria (pages 56- 58)

## + Developmental, Health & Family History

**Pre-, peri-, and postnatal risk factors**
- Maternal age at the time of pregnancy

- Maternal infections

- Drug exposure

- Individuals with Autism more likely to have obstetric difficulties during pregnancy, labor, delivery, and the neonatal period

- Postnatal Infections – herpes encephalitis or viral infections

## + Developmental, Health & Family History

**Developmental Milestones**
- Specifically language and social developmental milestones
- Any developmental regression

**Medical History**
- Current and Hearing Screenings
- Chronic ear infections
- Immune dysfunction
- Autoimmune disorders
- Allergy history
- Gastrointestinal symptoms

## + Developmental, Health & Family History

**Diagnostic History**

- Autism is sometimes observed in association with other neurological or general medical conditions

- APA (2000) states these conditions include: Encephalitis, Phenylketonuria, Tuberous sclerosis, and Fragile X syndrome
  - 10-20% of children with autism have a neurodevelopmental genetic syndrome
  - Up to 80% have mental retardation or intellectual disability
  - 2-4% Tuberous sclerosis
  - 2-8% Fragile X syndrome
  - 3-30% Epilepsy
  - As many as 25% of children with autism may develop seizures

## + Developmental, Health & Family History

**Family History**
- Family History of any autism spectrum disorder would support an autism diagnosis
- Other conditions that may provide some support for autism diagnosis:
  - Acquired epilepsy
  - Mental Retardation
  - Conditions with a genetic basis:
    - Tuberous sclerosis complex
    - Fragile X Syndrome
    - Schizophrenia
    - Anxiety
    - Depression
    - Bipolar disorder

## Medical Assessments that may be part of Autism Diagnostic Evaluation

- Audiological examination
- Tests for lead poisoning
- Growth measurements
- Neurological examinations as indicated EEG and MRI
- Examination of skin using Wood's light for skin markings consistent with tuberous sclerosis
- Laboratory Tests for:
  - Fragile X
  - Chromosome analysis
  - Rett's gene
  - Thyroid and PKI
  - Blood count or film for iron deficiency

## Indirect Assessment

- Data from caregivers and teachers
  - Valuable data, be aware of subjectivity of raters
  - Rating Scales

**Gilliam Autism Rating Scale-Second Edition (GARS-2)**
- Behavior Checklist used in diagnosing Autism ages 3 to 22
- 42 items, 3 subscales (Stereotyped Behaviors, Communication, Social Interactions)
- Based on definitions from APA and Autism Society of America
- Completed in 5-10 minutes by parent, teacher, or other familiar caregiver
- Autism Index (AI)- is sum of standard scores
  - ≥90 Average and above possibility of person having Autism
  - <90 Below Average possibility of Autism
- High False Negative Rate, not good as screening tool/NEVER as sole criteria

## Indirect Assessment

**Asperger Syndrome Diagnostic Scale (ASDS)**
- Behavioral Checklist assists in diagnosing Asperger's Disorder ages 5-18
- 50 items, five subtests (Language, Social, Maladaptive Cognitive, and Sensorimotor) completed by parent, teacher, or caregiver in 10-15 minutes
- Asperger Syndrome Quotient (ASQ)- summed up standard scores
  - ≥ 90 Likely to Very Likely probability of person having Asperger's Disorder
  - <80 Associated with Unlikely probability of Asperger's Disorder

**Pervasive Developmental Disorders Screening Test-II (PDDST-II)**
- Stage 3 – discriminate children with Autistic Disorder from other PDDs
- If 8 or more items are YES, Usually True, then positive finding for Autistic Disorder

## Interview

**Autism Diagnostic Interview-Revised (ADI-R)**
- ADI-R + Autism Diagnostic Observation Schedule (ADOS) are **GOLD STANDARD** for the diagnosis of autism
- Semistructured interview with trained interviewer and caregiver familiar with developmental history and child's current behavior
- Child must have developmental level of at least 2 years
- 93 items take 90-150 minutes to administer
- 3 domains
  - language/communication
  - reciprocal social interactions
  - Restricted, repetitive, and stereotyped behaviors and interests

## Direct Assessment

- Positive – Direct Assessment is relatively objective, not easily influenced by bias or inaccurate perception of others
- Negative – Is only a snapshot, behavior can be variable in different situations
- Important to use with Indirect Assessment

**Autism Diagnostic Observation Schedule (ADOS)**
- When partnered with ADI-R is considered the **GOLD STANDARD** in the diagnosis of Autism
- Standardized, semistructured interactive play assessment of social behavior or "planned social occasions"

## Direct Observation
### Autism Diagnostic Observation Schedule (ADOS)

- 4 modules
  - Module 1 preverbal or speak single words
  - Module 2 speak in phrases
  - Module 3 fluent speech for children and adolescents
  - Module 4 fluent speech for adults
- Requires 30-45 minutes and provides social-communication sequences that "press" for specific social behaviors
- Most appropriately used for diagnosis rather than treatment effectiveness or developmental growth
- Excellent interrater reliability within ADOS domains and internal consistency

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# Direct Observation
## Childhood Autism Rating Scale (CARS)

- One of most widely used diagnostic tools for children over 2

- 15 item structured observation tool scored on 4 point scale

- MUST have excellent understanding of developmental expectations
    - Evaluator compares child to others of same developmental level
    - CARS can be used by individuals from a variety of different disciplines

- Caution: Uses some items that are no longer considered primary symptoms of ASD (taste, smell, and touch response)
    - CARS has tendency to incorrectly classify non-autistic children with ID as autistic

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# Psycho-educational Assessment

- ALL School Psychologists should be able to conduct the psycho-educational evaluation of students with autism

- DSM IV-TR criteria are not synonymous with IDEA

- Symptoms of autistic disorders can significantly impact test performance
    - Impairments in communications may make it difficult to respond to verbal test items
    - Impairments in Social relations may make establish rapport and attention necessary to complete tests

- Accommodations necessary to obtain valid test results
    - Specific assessments appropriate for use with children with autism

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# Testing Accommodations and Modifications

- Need to determine if obtained scores reflect cognitive potential and not their unique characteristics of the disorder

- Testing accommodations will need to be on individual basis depending on specific needs

- Suggested Accommodations
    - Prepare the Student for the Testing Experience
    - Place the Testing Session in the Student's Daily Schedule
    - Minimize Distraction
    - Make sure of Pre-established Physical Structures and Work Systems
    - Use Powerful External Rewards
    - Preselect Task Difficulty
    - Modify Test Administration and Allow Nonstandard Responses

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# Specific Psycho-educational Assessment Practices

**Behavioral Observations**
- Identify unique behavioral challenges of the child by observing in classroom, social interactions, and in testing situation
- Identify validity of test results and document the core features of autism.

**Functional Assessment of Behavior**
- Parent and teacher interviews to understand function of behavior
- Special attention to disruptive behaviors that gain access to perseverative behaviors and/or escape demands

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# Specific Psycho-educational Assessment Practices
## Psycho-educational Testing

**Cognitive Functioning**
- Significant percentage of students with autism meet ID criteria
- IQ is associated with adaptive functioning, acquiring new skills, and long term prognosis
- Helpful in differential diagnosis
- Predictor of autism symptom severity

- Tests Appropriate for students with spoken language
    - Wechler Tests
    - Standford-Binet Intelligence Scale, Fifth Ed.
    - Differential Ability Scales

- Tests appropriate for students who have communication challenges
    - Leiter International Performance Scales, Revised
    - Kaufman Assessment Battery for Children, Second Edition

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# Specific Psycho-educational Assessment Practices

**Adaptive Behaviors**
- Majority of students with autism also have ID (must evaluate adaptive behaviors for ID diagnosis)
- Use of adaptive behavior scales for students with autism
    - Identify strengths and weaknesses
    - Document intervention efficacy
    - Monitor progress – students with autism has unique profiles

**Language Functioning**
- Usually speech and language pathologist
- May look at expressive and receptive language
    - Peabody Picture Vocabulary Test, Third Ed.
    - Expressive One-Word Picture Vocabulary Test

## Specific Psycho-educational Assessment Practices

**Psychological processes**
- Strengths and weaknesses
- Presence of comorbid SLD

**Academic/developmental functioning**
- Usually Special Education teacher
- Unique profile of strengths and weaknesses

**Emotional functioning**
- 65% present with symptoms of an additional psychiatric disorder
  - ADHD
  - ODD
  - OCD
  - Anxiety Disorders
  - Tic Disorders
  - Affective disorders
  - Psychotic Disorders

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## Assessment to Intervention School age years

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## Behavioral Interventions

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## ABA (Applied Behavioral Analysis)

- *Applied Behavior Analysis (ABA):* A notable treatment approach for children with an ASD is called applied behavior analysis (ABA). ABA has become widely accepted among health care professionals and used in many schools and treatment clinics.

- ABA encourages positive behaviors and discourages negative behaviors in order to improve a variety of skills. The child's progress is tracked and measured.

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## Examples of ABA

- Examples of *ABA:*

- **Discrete Trial Training (DTT):** DTT is a style of teaching that uses a series of trials to teach each step of a desired behavior or response. Lessons are broken down into their simplest parts and positive reinforcement is used to reward correct answers and behaviors. Incorrect answers are ignored.

- **Early Intensive Behavioral Intervention (EIBI):** This is a type of ABA for very young children with an ASD, usually younger than five, and often younger than three. It is based on well-studied principals of human learning and designed primarily for young children (ranging from three to 12 years of age). 30-40 hours per week of 1:1 intervention provided by "aides" for 2 or more years.

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## ABA Cont.

- **Pivotal Response Training (PRT):** PRT aims to increase a child's motivation to learn, monitor his own behavior, and initiate communication with others. Positive changes in these behaviors should have widespread effects on other behaviors.
  - Pivotal Response Training provides a guideline for teaching skills and has been most successful for language, play and social interaction skills in children with autism.
- **Verbal Behavior Intervention (VBI):** VBI is a type of ABA that focuses on teaching verbal skills. In a VB program the child is taught to ask for the cookie anyway he can (vocally, sign language, etc.). If the child can echo the work he will be motivated to do so to obtain the desired object.

**DIR: Developmental, Relationship Approach-Based Approach AKA "Floor time"**

- Developed by Dr. Stanley Greenspan

- *Floor time* focuses on emotional and relational development (feelings, relationships with caregivers). This method is more child-directed than some teaching methods. Its goal is to increase back-and-forth interaction and communication between child and adult. It also focuses on how the child deals with sights, sounds, and smells.

- Example: A boy may frequently tap a toy car against the floor. During a *Floor time* session, his mother may imitate the tapping action, or put her car in the way of the child's car. This will prompt the child to interact with her.

  Video on Floor time:

- *http://www.youtube.com/watch?v=sQZ_6D6xGzc&feature=fvwrel*

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**Picture Exchange Communication System**

- *The Picture Exchange Communication System (PECS):* PECS uses picture symbols to teach communication skills. The person is taught to use picture symbols to ask and answer questions and have a conversation.

- A child can be trained in *PECS* by a parent, caregiver, or therapist who has learned about the method. An *applied behavior analysis (ABA)* approach is used, in which *prompts* are given to guide the picture exchange.

- Further, in the early phases of *PECS* training, the child chooses a picture of a desired food, and receives the food in exchange for the picture. Getting the food is the *positive reinforcement* for using the picture to *communicate*.

  - Video on PECS:
    http://www.youtube.com/watch?v=c9ywf0WDoj0&feature=related

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**Academic and Social Skills Interventions**

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**Social Skill Interventions**

- Social Stories - short story that explains a specific challenging social situation.

- Example of a social story: My name is Julie. I make many friendly choices. This is awesome.

- One day, Mark felt sad on the playground. He did not know the rules to the game. I went up to Mark and started to explain the rules. Then, Mark could play the game, too. That was a very intelligent, friendly, and caring thing to do.

- On another day, Sarah helped me by making an art project for me. Sarah wanted me to have an art project like the other children in our class. Sarah cared about me, and wanted to do something to make me feel happy. I came back to school, saw the art project, and went up to Sarah and said, "Thank you." Saying "Thank you" is a very friendly and polite thing to do. It is an intelligent decision among friends.

- Choices like these are friendly choices. Deciding to help others, and to thank others when they have helped you, is an intelligent thing to do. I am a person who has made some wonderful, friendly, choices.

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**Social Skill Interventions**

- Components of Power Cards
  - The power card is the size of a trading card and includes a small picture of the special interest and the solution to the problem situation broken into three to five steps
  - The power card is created from the script and can be carried by the student
  - written at the individual's comprehension level
  - should include relevant pictures or graphics
  - Reinforce academic, behavioral and social skills

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**Power Card Strategy Script Example**

- **Power card strategy script . The Survivors play a game** The contestants on Survivor love to play games! In fact, playing games on the show is how they win rewards or win immunity. Sometimes the players and teams win their games, but sometimes, they lose. When they win, they give each other "high fives," smile or say, "Alright!" When they lose their game, the Survivors might not be happy. They could take a deep breath and say, "Maybe next time," or say "Good job" to their opponent. The contestants on Survivor think everyone should have fun playing games. They also want you to remember three things when playing games with other people:

- Games should be fun for everyone.

- If you win a game, you can: Smile, give high fives, or say, "Alright!"

- If you lose a game, you can: Take a deep breath and say, "Good job" to the opponent or say, "Maybe next time."

- http://autismspectrum.illinoisstate.edu/resources/factsheets/powercard.shtml

## + Example of Power Card



## + Peer Relation Interventions

- Establish structured activities with peers. These activities should have pre-assigned roles that can be practiced.

- Provide direct instruction on how to approach an individual or group.

- Provide direct instruction on the skills needed to interact with peers. This could be adult-directed or peer-mediated interventions.

- Structure social opportunities around student's special interests

- Access to typically developing children and the opportunity to interact successfully with typically developing children every day.

## + Intervention to Help with Learning Social Conventions

- Use Direct Instruction
- Example
  - Do not ask to be invited to someone's party
  - Speak to teachers in a pleasant tone of voice because they will respond to you in a more positive manner. They also like it if you smile every once in a while.
  - Do not correct someone's grammar when he or she is angry.
  - Never break laws – no matter what your reason.
  - When your teacher gives you a warning about your behavior and you continue the behavior, realize that you probably are going to get in trouble. If you stop the behavior immediately after the first warning, you will probably not get in trouble.
  - Do not touch someone's hair even if you think it is pretty.
  - Do not ask friends to do things that will get them in trouble.

## + Intervention to Help with Learning Social Conventions continued

- Understand that different teachers may have different rules for their classes.
  - Do not draw violent scenes.
  - Do not sit in a chair that someone else is sitting in – even if it is 'your' chair.
  - Do not argue with a policeman – even if you are right.
  - Do not tell someone you want to get to know better that he or she has bad breath.
  - Do not try to do what actors do on television or the movies. These shows are not the same as real life.
  - Do not pick flowers from someone's garden without permission, even if they are beautiful and you want to give them to someone." (Myles & Simpson, 2001, p. 8).

## + Visual Learning Interventions

- A TEACCH classroom is structured, with separate, defined areas for each task, such as individual work, group activities, and play.

- It relies heavily on visual learning, a strength for many children with autism and PDD.

- The children use schedules made up of pictures and/or words to order their day and to help them move smoothly between activities.



## + Interventions for Improving Eye Contact

- Decrease expectations for eye contact in some situations.

- Try to place speaker in front of student's vision with out getting too close.

- Strive to provide minimal auditory information and /or offer slight touch to encourage visual attention.

## Interventions to Improve Organizational Skills

- Provide as much visual structure as is possible

- Visual schedules that depict the student's daily routine.

- Use tape and labels to specify where instructional materials are to be placed.

- Calendars to help the student understand when regularly scheduled events may occur.

## Interventions to Help with Transition

- Offer a signal before transitions take place

- Use visual cues to prepare student for what will happen next

- Allow student to obtain deep pressure (if they like touch)

- Give student a script or social story to follow whenever an unexpected event takes place

- Extra support around transitions



## Psychopharmacological Interventions

### Neuroleptics

- Treat symptoms of aggression, self-injurious behaviors, hyperactivity, stereotypies, social withdrawal, and sleep disturbances.

- Brand names: Haloperidol, Pimozide, Risperidone, Olanzapine, Zipradisone, and Quetiapine.

## Psychopharmacological Interventions

### Antidepressants

- Treat symptoms of aggression, self-injurious behaviors, hyperactivity, stereotypies, social withdrawal, and sleep disturbances

- Brand names: Haloperidol, Pimozide, Risperidone, Olanzapine, Zipradisone, and Quetiapine

## Psychopharmacological Interventions

### Psychostimulants

- Treat ADHD symptoms in children with autism

- Brand names: Methylphenidate, Dextroamphetamine

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## Psychopharmacological Interventions

### Alpha-adrenergic agonists

- Treat children with ADHD and hyperarousal, although there is limited evidence of their effectiveness in children with autism

- Brand names: Clonidine and Guanfacine

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## Resources

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## Sacramento Metro Area Resources

- Applied Behavior Consultants
- Behavioral Education for Children with Autism
- B.E.S.T. Consulting
- Capitol Autism Services
- Center for Autism and Related Disorders
- Central Valley Autism Project
- Lovaas Institute
- Teaching Autistic Children
- Therapeutic Pathways

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## Sacramento Metro Area Resources

- Alta California Regional Center
  - http://www.altaregional.org/

- UC Davis Mind Institute
  - http://www.ucdmc.ucdavis.edu/mindinstitute/

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