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Prevalence and Characteristics
- 1 in 150 children will be diagnosed with ASD this year.
- Aspergers was added to the DSM in 1994
- These are the mildest and highest functioning of children on the spectrum of pervasive developmental disorders
- More common than “classic” autism
- Aspergers is essentially a social development disorder
- Co-morbid diagnosis is not unusual (“Asperger Soup”)

Co-Morbidity and Asperger Disorder
- Communication Impairments
- Learning Disability
- Attention Deficit (with or without hyperactivity)
- Obsessive Compulsive Disorders
- Mood disorders and Depression
- Anxiety disorders
- Oppositional Defiant Disorder
- Dyslexia
- Dysgraphia
- Tourette’s Syndrome
DSM Diagnostic Criteria

• A) Qualitative impairment in social interaction:
  • Significant impairment in use of nonverbal behavior, such as social interaction gestures, facial expression, eye-contact, and body postures
  • Inability to form and maintain developmentally appropriate relationships with peers
  • Failure to spontaneously seek out others for interactions, such as by sharing interests, achievements, and so forth
  • Difficulty with social or emotional

• B) Repetitive and restricted stereotyped patterns of behavior, activities, and interests:
  • Significant preoccupation with one or more stereotyped and restricted interests
  • Significant manifestation of nonfunctional routines or inflexible adherence to rituals
  • Repetitive and stereotyped motor movements
  • Significant and persistent

• C) Clinically significant social, occupational, or other functioning impairment
• D) Absence of a clinically significant general language delay
• E) Absence of a clinically significant delay in cognitive development of age-appropriate adaptive behavior (other than social interaction) and self-help skills
Salient Elements of Asperger Syndrome

A) Social, Behavioural & Emotional Deficits

- Social withdrawal
- Unskilled initiations and responses
- Socially stiff, awkward, emotionally blunted, and/or self-centered
- Unable to understand social cues
- Inflexible, lacking in perspective-taking
- Emotionally vulnerable and easily stressed
- Easy targets for teasing and

B) Communication Deficits

- Good speaking fluency ("Little Professors")
- Poor pragmatics (Social use of language)
- Poor non-verbal skills (facial expressions, body language, etc.)
- Poor understanding of idioms and others uses of language that are not literal
C) Cognitive, Academic & Intellectual Elements

- Generally average intellectual abilities and often gifted in certain areas
- Obsessive, narrowly defined interests
- Concrete/literal thinking style
- Rigidity and inflexible demeanor
- Poor problem solving skills
- Poor organization
- Difficulty in discerning relevant

D) Sensory and Physical/Motor Elements

- Sensory
  - Hypo- and hyper-sensitivity to stimuli
  - Poor auditory processing, including sound sensitivity
- Physical/Motor
  - Fine and gross motor challenges
  (Sensory and physical/motor challenges can lead to further social isolation)

School Issues

- Extreme work avoidance
- Will wait forever for help
- Eewww gross (nose picking, burping etc)
- Seen as immature by adults and peers
- Extreme difficulty in organizational skills
School Issues continued

• Distraction / Inattention
• Tunnel Vision (They do it “their” way)
• Rote Memory (impedes comprehension)
• Visual vs. Auditory Processing
• Problem Solving Difficulties
• Motor Skills (printing and physical education are challenging)

School Issues continued

• Motivation (intrinsic motivation may be seriously lacking)
• Difficulty comprehending abstract concepts
• Difficulty distinguishing relevant and irrelevant information (can get stuck on the details of a task rather than seeing the big picture)
• Lack of perspective taking (small group work can be torture)

Adult frustration comes from...

• “He’s sooo smart.”
  • Cognition / Intelligence is not related to social functioning
• “But he managed yesterday”
• Symptoms “disappear” in very specific situations
• Attributing behaviour to some devious purpose
  • All behaviours do serve a purpose (but not necessarily a devious purpose). New and more appropriate skills must be taught that serve the same purpose or function
Enjoying the child with Aspergers means appreciating their:

Honesty: He will not understand why people lie. He will stick loyally to people. He will say exactly what he thinks.

Creativity: He will tackle a problem from a completely different angle than anyone else. He will use his own methods of problem solving and ignore conventional methods. He will genuinely find difficulty distinguishing between fact and reality. He will often be exceptionally talented musically, artistically, or dramatically.

Special Interests: He may develop a topic or a couple of topics of special interest. He may add a new interest from time to time. He will want to find out everything he can on the current topic. He can communicate about his special interests in an adult manner and will often discuss them as a way of feeling more secure in social situations.

Sense of fairness and justice: He has a need for things

Three Components of Success

1. Management of Meltdowns
   - Stop giving instructions or making requests or promising things if Johnny stops....in short....stop talking
   - It’s OK to be empathetic without worrying about reinforcing inappropriate behaviour.
   - Provide a quiet, safe environment in which to calm down.
   - Avoid further social isolation by preventing peers from seeing the meltdown.
   - When possible and appropriate (e.g. parental permission) give the class a debriefing after the meltdown.

2. Prevention

3. Skills Development
Management of Meltdowns cont’d

- Avoid inadvertent reinforcement by allowing the child to completely escape the task.
- Return to it later when the child is calm
- Send the work home
- Finish all tasks on a positive note and immediately following a desirable behaviour (this may mean prompting some minimal level of completion or compliance).
- Provide generous and explicit praise when the child uses an alternative appropriate behaviour to accomplish the same purpose/function as the inappropriate behaviour.

2. Prevention

Environmental Strategies that are conducted to make the inappropriate behaviour less likely to occur

Prevention continued

- Recess is not a break for the child with Asperger Syndrome. It is the time of day in school that draws upon the skills a child with ASD lacks most.
  "The playground is probably the most threatening environment you could put a child with AS into. Vast open spaces, complex social interactions, a myriad of unwritten social rules to adhere to, and a plethora of sounds, sights, and smells combine to make a child with AS feel at a loss. It is also a situation in which a child with AS, who has poor motor skills, will stand out like a sore thumb and be particularly vulnerable to bullying, both physical and verbal."  Matt Winter
Prevention continued

- At recess
  - Add structure to the unstructured
  - Identify and appropriate “out”
  - Encourage and facilitate positive friendships that may be developing in the classroom
  - Ensure that yard duty teachers know the child and the strategies that support the child
  - Use the educational assistant in the yard, not just in the classroom
  - Modify outdoor time to facilitate small group social experiences inside (structured games, art, computer time, etc)

Prevention continued

- Blocking and avoidance of significant triggers
  - Johnny never stands next to Ben in line
  - Johnny never is in the middle of a line
  - Teacher chooses small work groups
  - Teacher prepares child for significant changes in routines or expectations
  - Accommodations at home and on the IEP that ALL teachers are aware of.
  - Environmental set-up: Requires knowing the individual child’s triggers.

Prevention continued

- Accommodations at home and on the IEP
  - IEP strategies should clearly identify the meltdown responses from adults
  - Allow for and assist parents in accommodating homework (e.g. scribing, reduced no. of questions, cut and paste pictures instead of drawing, etc)
  - Accommodations should allow for the demonstration of knowledge without the need for elaborate products that may not be related to the acquisition of that knowledge.
Prevention continued
- Planned and controlled use of reinforcers
- Eliminate sources of reinforcement that the child can access which interfere with on-task behaviour
- E.g. Cleaning out the child’s desk of all objects not necessary for the immediate task
- Discuss with the parents what should and should not come to school each day
- Set specific times for access to reinforcing items and/or activities (non-contingent reinforcement)

Prevention continued
- Use technology when ever possible.
  - E.g. Voice activated typing software
  - Wordq™
  - Clicker 5™
  - Cut and paste from the internet or National Geographic for projects (child labels diagrams)

Prevention continued:
Impact of Special Interest Areas
- On Identity
- On Academics
- At Home
- On Community
- On Future Careers
  “We can see in the autistic person, far more clearly than with any normal child, a predestination for a particular profession from the earliest youth. A particular line of work often grows naturally of his or her special abilities.” (Asperger, H. 1991)
Integration of SIAs into Core Elementary School Curriculum

<table>
<thead>
<tr>
<th>Academic Area</th>
<th>Dinosaur Integrated Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Read the complete guide on prehistoric life (Haines and Chambers, 2006)</td>
</tr>
<tr>
<td>Writing</td>
<td>Research and write a paper on Tyrannosaurus Rex</td>
</tr>
<tr>
<td>Spelling</td>
<td>Learn to spell names of dinosaurs</td>
</tr>
<tr>
<td>History</td>
<td>Research the Precambrian period</td>
</tr>
<tr>
<td>Speech</td>
<td>Present the history of paleontologist George Gaylord Simpson</td>
</tr>
<tr>
<td>Math</td>
<td>Write story problems about tons of leaf consumption by Triceratops</td>
</tr>
<tr>
<td>Science</td>
<td>Research the asteroid theory of the Cretaceous extinction</td>
</tr>
<tr>
<td>Art</td>
<td>Design and build a clay model of Stegosaurus</td>
</tr>
<tr>
<td>Internet Skills</td>
<td>Consult with paleontologist online</td>
</tr>
</tbody>
</table>

3. Skills Development: Underlying ABA Assumptions

- Learning is based on an understanding of and manipulation of observable behavior and stimuli
- Diagnostic labels may be independent of interventions
- Interventions must be empirically judged
- Assumes that behavior is controlled by antecedent and consequent events

We will learn about interventions that are grounded in scientific evidence

**Skill-Based Interventions are commonly used, valid methods, designed to teach, maintain, or support socially and functionally valid skills. They include:**

- Environmental & Organizational Supports
- Visual Supports & Schedules
- Cognitive-Behavioural Interventions
Environmental & Organizational Supports

- Environmental modifications/supports
- Routines and structure
- Video modeling
- Competent buddy pairing
- Protection from teasing/bullying

Visual Supports and Schedules

- Assists students to:
  - Organize and predict daily events
  - To know what will happen next
  - To transition from one activity to the next
  - To understand contingencies
- Visual support forms
  - Pictures and/or icons of scheduled activities
  - Strips of poster board on students desk that sequentially show pictures of scheduled activities
  - Schedule student carries from class to class

Additional Visual Supports That Support Behavior

- Task Organizers & Modified agendas
- Turn Taking Cards (e.g. class helper turn)
- Waiting & Self-control Symbols
- Choice Making & Task Order
- Rules & Break Cards
- Calming Supports
- Introducing Change
- First, Then Cards
- Video Modeling
Cognitive–Behavioural Interventions

- Involves using self-management strategies that teach students to actively monitor and control their own behaviors
- Relies on self-monitoring (self-assessment, self-recording), self-evaluation
- Involves self reinforcement for goal attainment.
- Involves learners
- Differentiating the occurrence of a target response
- Reliable self-recording the target response in accordance with some specified standard
- Evaluating their behavior relative to the goal
- Delivering contingently self-selected rewards and reinforcement
- Frequently also involves students covertly or overtly verbalizing cues, questions and other information to themselves that they need to make correct responses

Cognitive – Behavioural Interventions

1. Social Stories
2. Video modeling
3. Power Cards
Social Stories*

- **Social Story Components:**
  - Descriptive sentences
  - Perspective sentences that describe the feelings and reactions of others
  - Directive sentences are statements about appropriate behavioural responses
  - Affirmative sentences (a shared value within a given culture)
- *http://www.thegraycenter.org/Social_Stories.htm

**Social Story:** *Not a good example*

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Social Stories

- There are many commercially available social story products available, and for many children these are useful.
- Other children will benefit from a more personalized story that uses:
  - Actual photographs of the child, setting and significant others
  - Names of significant others
  - Personalized information about the child's highly individualized experience

Power Cards

- The Power Card strategy connects an appropriate or desired behavior or social skill to an individual's area of special interest.
- Power Cards involve scenarios wherein a child's special interest, a hero, or a model connected to a special interest models a solution to a problem similar to the one experienced by the child.

The Power Puff Girls Play a Game

The Power Puff Girls like to play games. Sometimes they win the game. When they win games the Power Puff Girls feel happy. They might smile; give each other a "high five"; or say, "Yah". Sometimes they lose the game. When they lose games the Power Puff Girls might not feel happy. They might take a deep breath; say "good job" to their friend; or say "maybe next time". The Power Puff Girls want everyone to have fun playing games. They want you to remember these three things when playing games the Power Puff way:

1. Games should be fun for everyone.
2. If you win a game you can: Smile; give a "high five", or say, "Yah".
3. If you lose a game you can: take a deep breath; say "good job" to your friend; or say "maybe next time".
Power cards: Results

Physiological/Biological/Neurological Interventions

Common Interventions

Pharmacology
There are no “behavioural” medications. When medication alters a child’s behaviour it is due to its effect on an underlying condition such as anxiety or depression

Sensory Integration
There is limited empirical support but many parent testimonials

Megavitamin Therapy and Dietary Supplements
Many children have limited diets which can affect behaviour (irritability, energy, responsiveness, etc.) so a balanced diet following the Canada Food guide is recommended. There is no evidence that mega-anything is helpful but there is a growing body of research that suggests mega-vitamin therapy can be dangerous

Restrictive Diets (e.g. casein and gluten free diets)
There is empirical evidence that these highly restrictive diets are harmful to the brain development of children

CHARACTERISTICS OF EFFECTIVE INTERVENTIONS: PPM-140

- Based upon empirical evidence of effectiveness and goals are based in assessment (need a baseline)
- Highly structured and clearly defined interventions
- Interventions are based on individual assessment of the problem.
- Effective interventions are not based on the topography of the behaviour or the diagnosis
- Specificity in the development of objectives
- Interventions are constantly monitored to demonstrate efficacy and are changed as needed
CHARACTERISTICS OF EFFECTIVE PROGRAMS, cont’d

- Direct teaching of social skills (alternative curriculum on the Individual Education Plan)
- Active programming for generalization
- Individualized lesson plans
- Use peer models and tutors
- Have short and learn term goals, and may be necessarily intensive in the initial stages

CHARACTERISTICS OF EFFECTIVE PROGRAMS, cont’d

- Criteria for achievement of objectives
- Objective measures of progress
- Ongoing measures of progress

Parent Tasks

- Don’t rely on anecdotal information. An educator would never report that Johnny is doing “great” in reading or “so much better in reading.”
- Be a support & source of information to your child’s teacher.
- Take IEP home and read it carefully. Participate! Provide feedback and feel free to write all over it.
- Have a behaviour analyst or other advocate accompany you to the IEP and other team meetings if you find them overwhelming or intimidating.
- Require accountability.
  e.g. If goals on the IEP have not changed from term to term, ask why
- Seek frequent measures of progress (three IEP meetings per year may be insufficient)
- Obtain training to allow replication at home.
- Don’t ask the educator to do things that you are not willing or able to do yourself.
Children with Asperger Syndrome are more likely than their typical peers to develop a mental health issue (depression, anxiety, even suicide ideation). It is important to recognize the signs of these disorders. The child may withdraw, become increasingly aggressive, have frequent meltdowns, or become more rigid than usual. It will be important to seek the help of a mental health professional who is very familiar with these disorders.

References


References

Thank you.