



Autism 101: Introduction to ASD

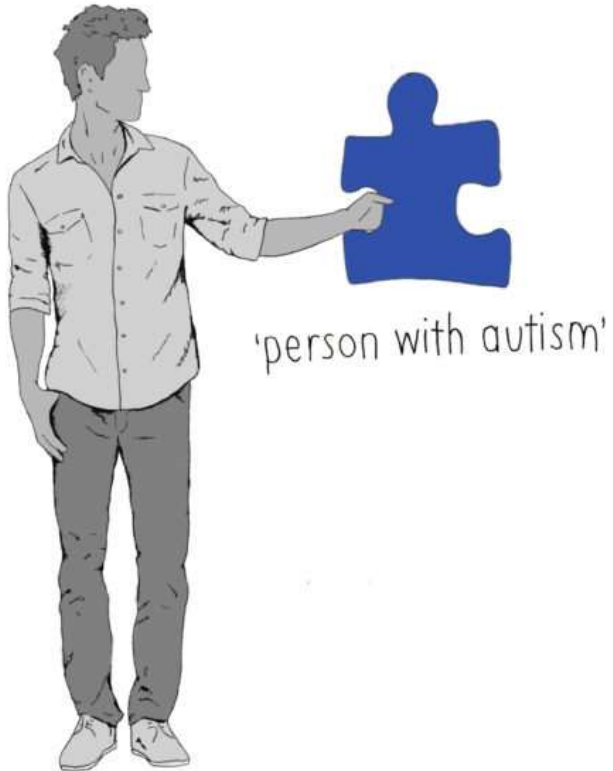
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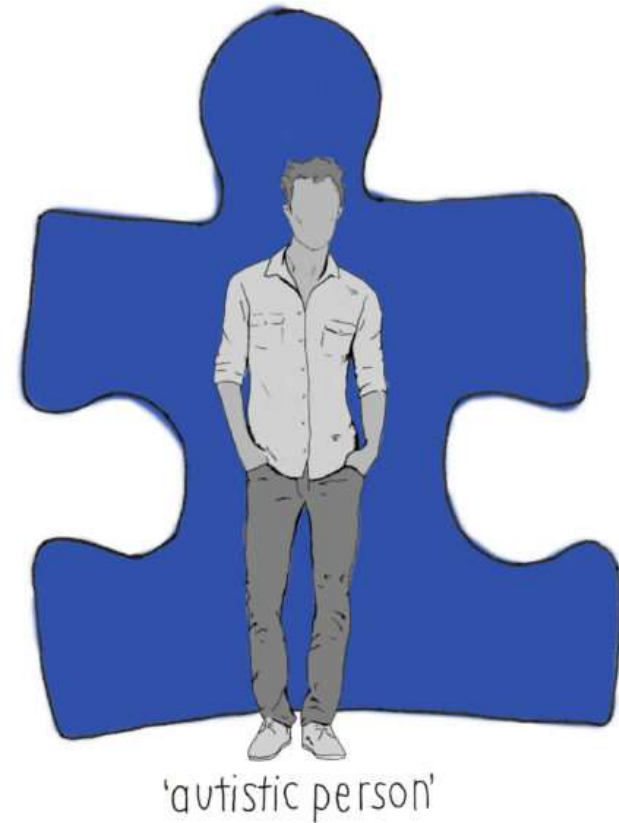
Adapted from talks by Drs.
Lauren Kenworthy, Srishti
Rau, and Annie Inge

A Note on Language!

PERSON-FIRST



IDENTITY-FIRST



Neurodiversity

“Autism isn't something a person has, or a "shell" that a person is trapped inside. There's no normal child hidden behind the autism. Autism is a way of being. It is pervasive; it colors every experience, every sensation, perception, thought, emotion, and encounter, every aspect of existence. It is not possible to separate the autism from the person--and if it were possible, the person you'd have left would not be the same person you started with” (Sinclair, 1993)

Social Communication & Social Interaction Problems

- Social-emotional reciprocity
- Nonverbal Communication
- Developing & understanding relationships

Autism Spectrum Disorder

Repetitive Behaviors & Restricted Interests

- Repetitive movements
- Inflexibility
- Unusually intense interests
- Unusual sensory interests or sensory aversions

- With accompanying language impairment
- With accompanying intellectual impairment

The Three Functional Levels of Autism

ASD Level 1 Requiring Support



difficulty initiating social interactions

organization and planning problems can hamper independence

ASD Level 2 Requiring Substantial Support



social interactions limited to narrow special interests

frequent restricted/repetitive behaviors

ASD Level 3 Requiring Very Substantial Support

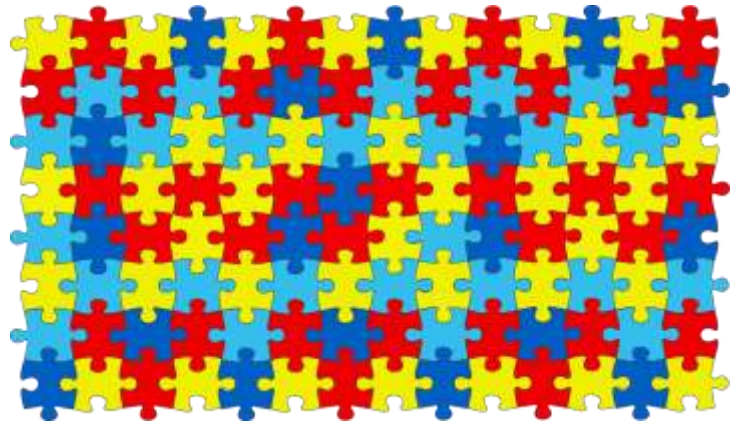


severe deficits in verbal and nonverbal social communication skills

great distress/difficulty changing actions or focus

verywell

Epidemiology



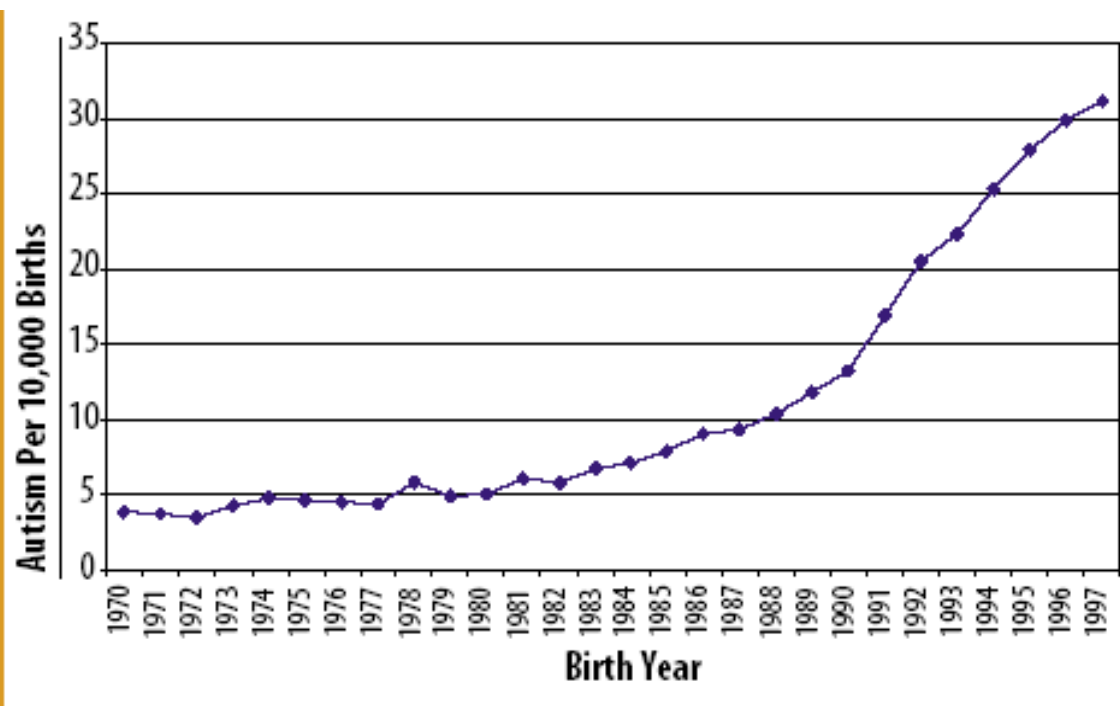
- Current prevalence
 - 1/54
- Gender
 - Boy 4: 1 more likely to be affected than girls
- Race/Ethnicity
 - Black and White children 1.2x more likely than Hispanic children
- IQ
 - 1/3 of children have an intellectual disability (IQ < 70)

CDC, Autism and Developmental Disabilities Monitoring Network

<https://www.cdc.gov/ncbddd/autism/addm-community-report/documents/addm-community-report-2020-h.pdf>

What has caused increase?

- Evolution of Diagnostic Criteria? YES
- Increased awareness? YES
- Immunizations? NO (Frisch, 2019)
- Other environmental factors?



Biology and Mechanisms

- Genetic and environmental contribution
 - Heritability risk
 - 15-20% of siblings of individuals with ASD have the disorder (Broader autism phenotype)
 - Fragile-X, chromosome abnormalities
 - Environmental
 - Not associated with vaccines (Frisch, 2019)
 - Environment understood broadly, including womb
 - No single contributing factor

ASD Presentation - Infancy/Toddlerhood

- Communication Deficits

- Language delays
- Nonverbal communication (decreased and atypical)
- Atypical language features (prosody, scripting, neologisms)
 - <https://resources.autismnavigator.com/asdglossary/#/section/36/languageimpairment> (Sarina at 36 months)

- Restricted Interests and Repetitive Behaviors

- Including stereotyped and repetitive language , inflexible adherence to specific routines
 - [https://resources.autismnavigator.com/asdglossary/#/section/21/repetitiveMotor\(3R\)](https://resources.autismnavigator.com/asdglossary/#/section/21/repetitiveMotor(3R))

ASD Presentation - Infancy/Toddlerhood

- Play

- Atypical interest in objects (including bias for objects)
- Limited functional use of toys
- Lack of imaginative play
 - <https://resources.autismnavigator.com/asdglossary/#/section/17/sharingPlay>
- Repetitive play



ASD Presentation - Middle Childhood

- Communication deficits

- Abnormal social approach
- Impaired back-and-forth conversation
- Abnormal eye contact and body language
- Poor understanding and use of gestures
- Echolalia, stereotyped speech, idiosyncratic phrases

<https://resources.autismnavigator.com/asdglossary/#/section/23/repetitiveSpeech> (1 B)

- Social difficulties

- Difficulty sharing imaginative play
- Difficulty making friends
- Difficulties adjusting behavior to suit varied social contexts

ASD Presentation - Middle Childhood

- Motor stereotypies
 - rocking, hand flapping
- Insistence on sameness, inflexible adherence to routines
 - difficulties with transitions, need to take same route or eat same food

ASD Presentation - Middle Childhood

- Highly restricted, fixated interests that are abnormal in intensity or focus
 - strong attachment or preoccupation with unusual objects, excessively perseverative interests



ASD Presentation - Middle Childhood

- Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment
 - adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement

https://www.wellchildlens.com/video_room/detail/see-the-signs/early%20warning%20signs/D49A200BF77C%20C4807AB6%203C4C%204333%20521E

ASD Presentation - Adolescence

- Adolescence:
 - Rigid thinking patterns
 - Growing social differences
 - Poor pragmatic skills
 - At risk for victimization
 - Higher functioning at greater risk for Comorbidities



<https://www.youtube.com/watch?v=6ko5gyFwtf8&t=302s>

ASD Presentation - Girls

- What is driving the difference in prevalence across genders?
 - “Female Protective Effect”?
- ASD presentation in girls vs. boys make recognizing ASD symptoms more challenging in girls
 - Girls more socially savvy
 - Integrate scripted language well
 - Good at “camouflaging”



Common Questions About ASD

Why do you think my child may have autism, and not a communication disorder/speech delay?

- We expect that children who have difficulties with communication/speech will find other ways to express themselves. For example, a speech delay does not prevent a child from using other strategies to share their interests: when a child with a speech delay finds a new, fun toy, they would share their interest with you by pointing at it and looking at you.

Common Questions About ASD

Will my child always have autism?

- Your child will likely always have autism. As they get older we hope that the strengths that come with autism will emerge.
- Autism is something you are born with - a brain based difference. We can think of it as a social learning disorder. While we can't change children's predisposition, we can give them tools to help them be more successful.



Common Questions About ASD

You mentioned the strength in autism and neurodiversity – what is that?

Children with autism are often detail oriented thinkers, and often pay more attention to things than people. That allows them to be logical and original thinkers. Our world is better because we have people with autism with it. We can give them ways to live happily in a neurotypical world.

Will my kid be able to achieve what other kids do?

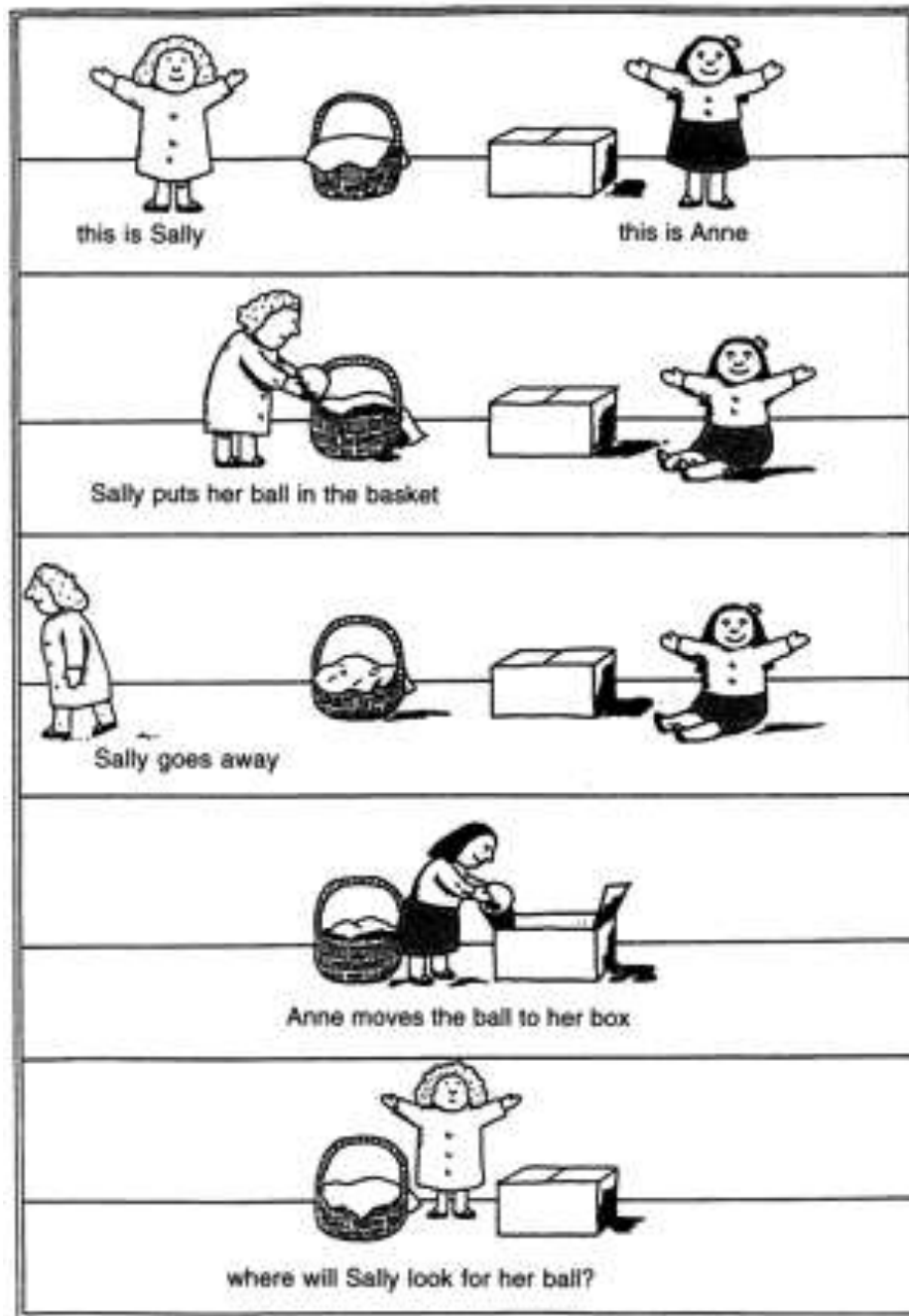
What we want is for your child to grow up and have a happy and fulfilling life. We have no reason to expect that he won't. Don't lower your expectations for your child, but know that they may be on a different timeline to achieve certain goals and milestones.

UNDERSTANDING COGNITIVE & LEARNING FEATURES IN ASD

“A failure to understand how a child’s typical behaviors reflect this disability can result in misperceptions such as viewing the child as noncompliant, willfully stubborn, or unmotivated, rather than confused, involved in repetitive routines, or focusing on less relevant aspects of the situation.” (Kunce & Mesibov, 1998)

Social Cognitive Deficits

- Theory of Mind:
 - The ability to attribute mental states (i.e., beliefs, desires, emotions, perceptions and intentions) to self and others in order to understand and predict behavior
- False Belief Task
 - Sally Ann task
 - Mastery increases with age, with > than chance by age 4
 - 80% (including those with average IQ) of ASD fail false belief tasks across age span



Sally and Ann scenarios (Baron-Cohen, 1985)

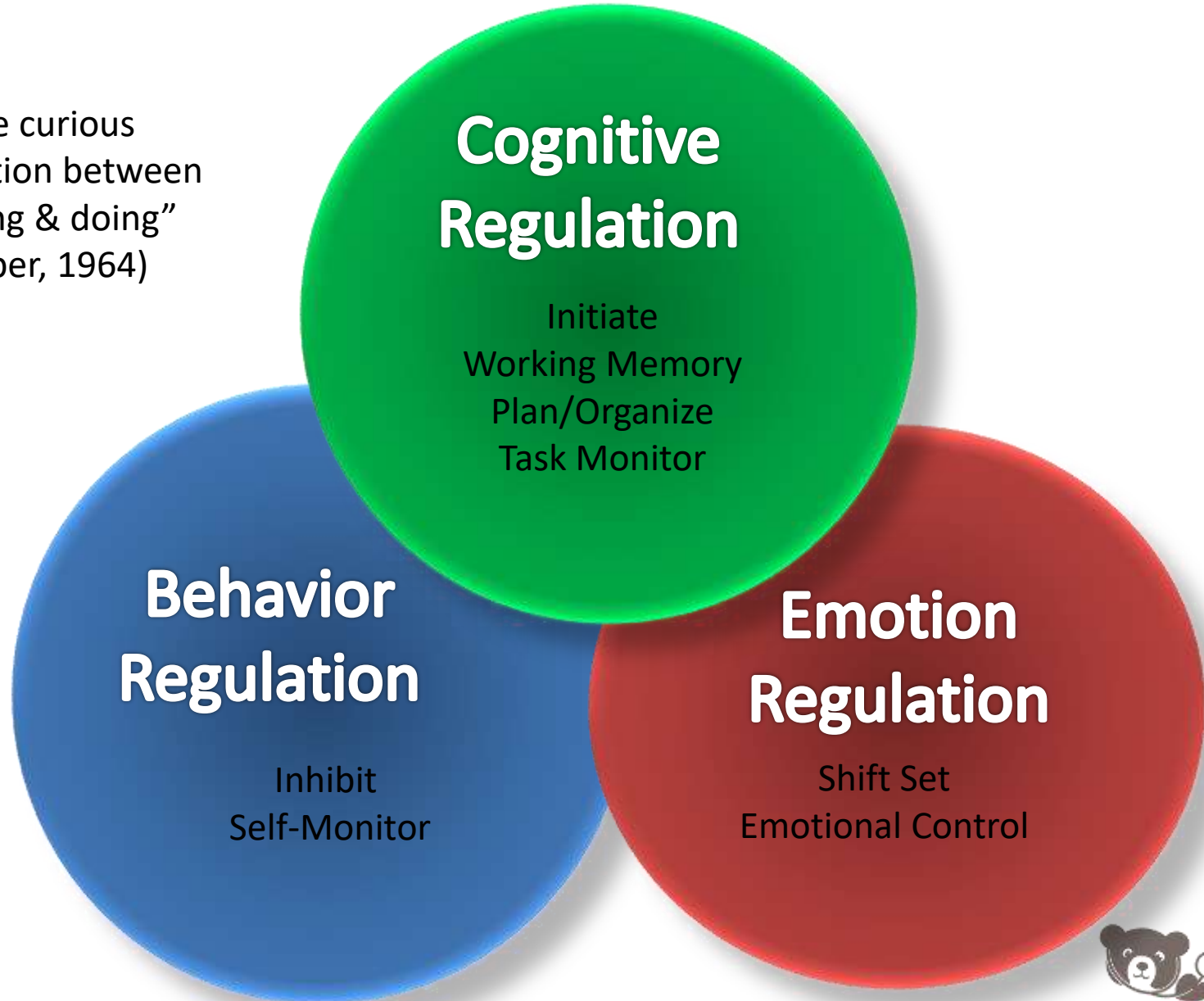
Visual Learners and Focus on Details

- Some people with ASD learn more effectively by seeing vs. hearing information
- Strength for specificity vs. generalization and a limited ability to prioritize the relevance of the details
- Allows to see things in great details, but lose the big picture



Three Factor Model of Executive Function

“The curious
dissociation between
knowing & doing”
(Teuber, 1964)



Most Common EF Challenges in ASD

Flexibility

- Transitioning from one activity to another
- Changes in routine
- Violations of expectations
- Seeing more than one way of doing things
- Easy to get stuck

Planning/Organization

- Knowing how to accomplish a goal
- Prioritizing
- Identifying main idea and organizing thinking
- Can't see the forest for the trees

Social Orienting

- Deficits in social orienting and responsivity in early development impact language and cognitive development
 - Problems with imitation
 - Reduced procedural knowledge related to nonfunctional/atypical play
 - Joint attention



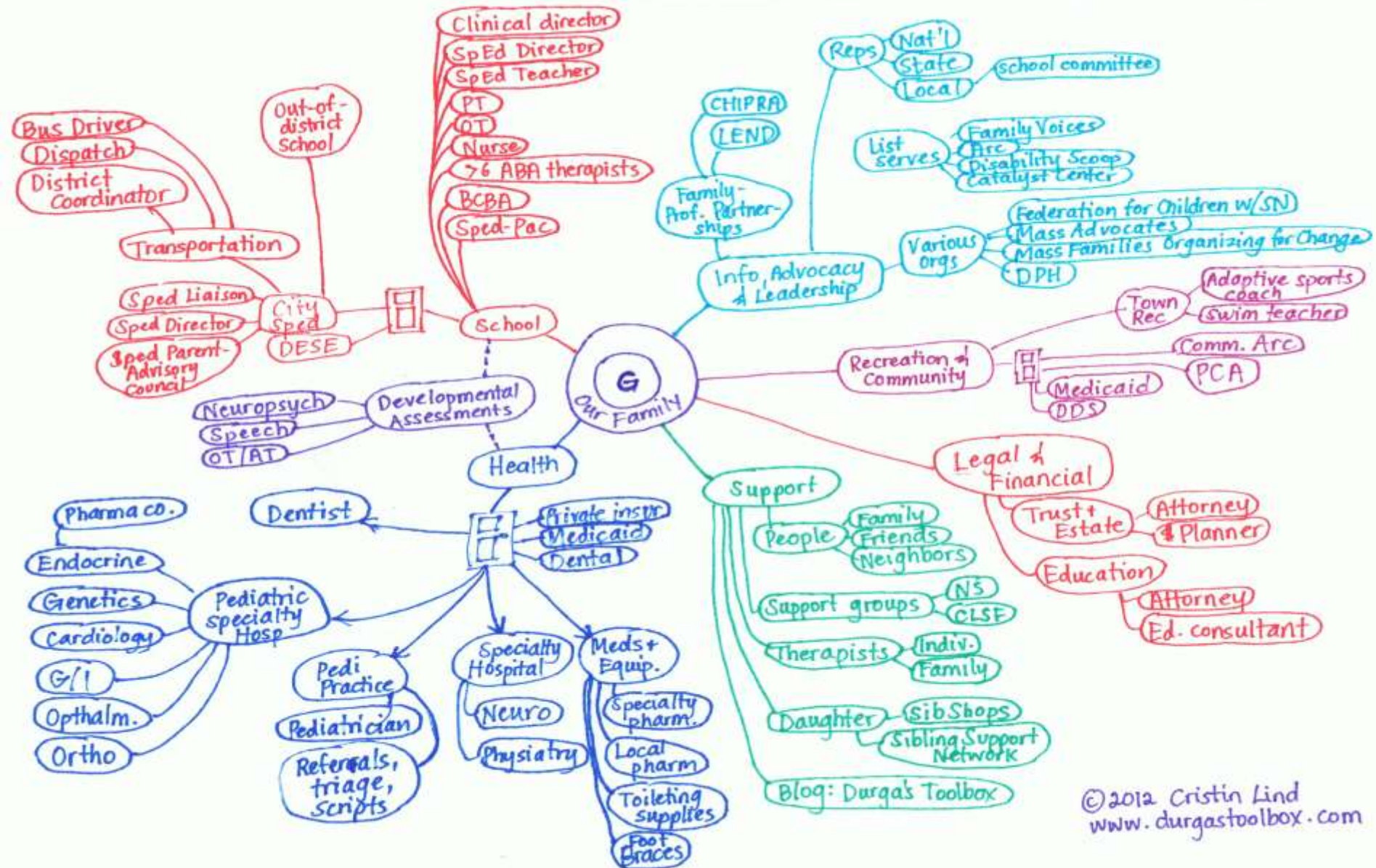
Social Difficulties

- Social motivation ranges
- Interference from circumscribed and/or intense interests
- Social miscues associated with misinterpretations of nonliteral language and nonverbal communication
- Weaknesses in self-monitoring and flexibility impact social-emotional reciprocity

Common Social Strengths

- Honest
- Loyal
- Ethical
- Altruistic
- Straightforward
- Not susceptible to peer pressure

Autism... It's Complicated



Referrals

The screenshot shows a webpage with a red header containing a 'Coronavirus Update' link. A purple sidebar on the left is titled 'For Healthcare Providers' and includes links for 'Refer a Patient', 'Clinic Guidelines', 'Autism and Neurodevelopmental', and 'Diagnostic Imaging and Radiology'. The main content area is titled 'Autism and Neurodevelopmental Referral Guidelines' and includes a sub-header 'Share' with social media icons. Below the sub-header is a paragraph: 'Children with neurodevelopmental concerns need specialized testing, diagnosis and treatment, as well as comprehensive care coordination to achieve the best outcomes. Learn about our related referral guidelines.' A list of six referral options is shown, each with a plus icon and a horizontal line below it:

- + Child Development Clinic (Ages 0-3)
- + Neurodevelopmental Pediatrics (Ages 0-23)
- + Center for Autism Spectrum Disorders (CASD) (Ages 1-26)
- + D.C. Autism Evaluation Clinic (Ages 3-14)
- + Autism Behavioral Communication Support (Ages 0-23)
- + General Neuropsychology Service (Ages 4-22)

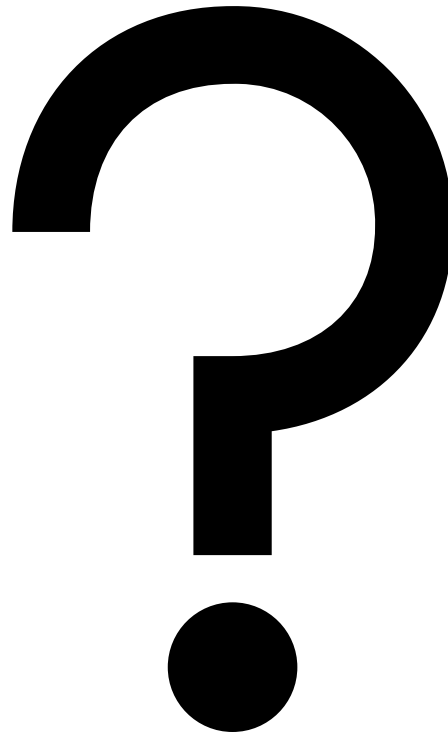
At the bottom, a navigation bar features colored buttons for 'Visiting & Staying', 'Specialty Care Patients', 'Pediatric Primary Care', 'For Healthcare Providers', 'Research and Innovation', and 'Advocacy & Outreach'. Below the navigation bar is a footer with links: 'About Us | All Care Services | Locations | Paying Your Bill | Careers | Healthcare Education | News and Events | Contact Us | How to Help | Volunteer'.

<https://childrensnational.org/healthcare-providers/refer-a-patient/clinic-guidelines/autism-and-neurodevelopmental-referral-guidelines>

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Questions?



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