

Relevant Disclosure

- Co-author of the Autism Spectrum Rating Scales (MHS, 2009).
- Co-author of Assessment of Autism Spectrum Disorders text (Guilford, 2009).
- Co-author/presenter Assessment of Autism Spectrum Disorders CEU (APA, 2009).
- Co-author of Raising a Resilient Child With Autism Spectrum Disorders (2011, McGraw Hill).
- Co-author of Treatment of Autism Spectrum Disorders (2012, Springer).
- Co-author of the Autism Spectrum Evaluation Scales (in development, MHS).
- · Compensated speaker.

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Goals

- Briefly discuss the historical theories of Autism Spectrum Disorders (ASD).
- Define ASD and DSM 5 criteria.
- Briefly discuss symptoms of ASD by age into and including adulthood.
- Briefly discuss a core theory of ASD.
- Discuss data from the ASRS, the largest
- epidemiological/standardization sample collected of normal children and those with ASD.
- · Discuss the ASRS and other methods for assessment, diagnosis and treatment of autism.

We are social beings.



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What Benefits Do We Derive From Socialization?



- SupportSurvival
- Affiliation
- Pleasure
- Procreation
- Knowledge
- Friendship

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The social development of autistic children is qualitatively different from other children.



In normal children perceptual, affective and neuroregulatory mechanisms predispose young infants to engage in social interaction from very early on in their lives.



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Kanner's Description (1943)

- first physician in the world to be identified as a child psychiatrist
- founder of the first child psychiatry department at Johns Hopkins University Hospital
- Wrote *Child Psychiatry* (1935), the first English language textbook to focus on the psychiatric problems of children.



Leo Kanner who introduced the label *early infantile autism* in 1943 in his paper : Kanner, L. (1943). Autistic disturbances of affective contact. Nervous Child, 2, 217-250.

Kanner's Description (1943)

- His seminal 1943 paper, "Autistic Disturbances of Affective Contact", together with the work of Hans Asperger, forms the basis of the modern study of autism.
- Leo Kanner was the Editor for Journal of Autism and Developmental Disorders, then called Journal of Autism and Childhood Schizophrenia



Leo Kanner who introduced the label early infantile autism in 1943 in his paper : Kanner, L. (1943). Autistic disturbances of affective contact. Nervous Child, 2, 217-250.

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Kanner's Description (1943)

- Inability to relate to others
- Disinterest in parents and people
- Language difficulties
- Fascination with inanimate objects
- Resistance to change in routine
- Purposeless repetitive movements
- A wide range of cognitive skills
- Where they possess an innate inability for emotional contact



Nervous Child, 2, 217-250.



A Brief Research Update of ASD and Transition to Adulthood

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Background

- Autism Spectrum Disorder (ASD) is a neurodevelopmental condition marked by deficits in social interaction, communication, and repetitive behaviors.
- The etiology of ASD is complex, involving both genetic and environmental factors.
- Recent studies emphasize the need for individualized and technologydriven interventions to improve quality of life and functional outcomes (Qin et al., 2024).
- Despite progress in understanding ASD, challenges remain in diagnosis and treatment, mainly due to the disorder's heterogeneity and co-occurring conditions, which complicate the diagnostic process (Hus & Segal, 2021).

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Diagnosis

- ASD diagnosis typically involves using standardized tools such as the Autism Diagnostic Observation Schedule (ADOS-2) and Autism Spectrum rating Scales (ASRS). However, these tools do not specifically diagnose
- This leads to potential misdiagnosis, especially in those with cooccurring cognitive or sensory impairments (Bishop & Lord, 2023).
- Early detection is critical, as timely intervention can significantly influence developmental outcomes.
- Advances in diagnostic technologies, including machine learning and biomarkers, enhance the precision of ASD diagnoses (Yu et al., 2024; Rasul et al., 2024).

Treatment

- The treatment of ASD is highly individualized, with a range of behavioral, educational, and pharmacological interventions available.
- Applied Behavior Analysis (ABA) remains one of the most well-established therapies, particularly for improving children's intellectual functioning and adaptive behaviors (Eckes et al., 2023).
- Other interventions, such as Cognitive Behavioral Therapy (CBT), have proven effective in managing emotional and social challenges (You et al., 2023).
- Emerging therapies, including transcranial pulse stimulation and virtual reality-based interventions, offer promising alternatives for addressing the core symptoms of ASD and improving social skills (Cheung et al., 2023; Dechsling et al., 2021).

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Outcome

- Long-term outcomes for individuals with ASD vary widely, influenced by early intervention, co-occurring conditions, and the level of intellectual functioning.
- Early comprehensive treatment models have improved cognitive, language, and adaptive functioning, especially when intensive interventions involve parental participation (Shi et al., 2021).
- However, many individuals with ASD continue to face challenges in adulthood, particularly in areas such as employment and independent living (Scheeren et al., 2022).
- The outcomes' trajectory highly depends on the severity of symptoms and access to sustained, individualized support (Elias & Lord, 2021).

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Assessment of ASD

- High levels of co-morbidity require a comprehensive assessment including: intellect, neuropsychological abilities, achievement, emotional status, personality and protective factors.
- A careful history is essential.
- Well developed, reliable and valid measures must be used to the extent they are available.
- DSM 5 or ICD 10 criteria must be met.

Making the Diagnosis of ASD

- Meets DSM 5 Criteria.
- Coping behaviors assessed.
- Co-morbid behaviors and disorders assessed.
- Corroborating data obtained about child and adulthood.
- · Intellectual, achievement and neuropsychological data collected if warranted.

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Determining IDIEA Eligibility of Autism

- Autism, as defined by <u>Individuals with Disabilities Education Act (IDEA)</u>, refers to "a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance."
- performance. This federal definition then proceeds to name traits commonly related to the condition: "Other characteristics often associated with autism are engaging in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.
- The term autism does not apply if the child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in [IDEA]." primarily because the child has an emotional disturbance, as defined in [IDEA]." IDEA rounds out its definition by noting that a child who shows the characteristics of autism after age three could be diagnosed as having autism if the criteria above are satisfied. This enables a child to receive special eduction services under this classification if he or she develops signs of autism after has or her third birthday. Typically a psychiatrist, clinical psychologist, physician or other highly qualified professional makes the diagnosis. It would not be uncommon for the evaluation team to suspect Autism, then ask the parent to see a psychiatrist, clinical psychologist or appropriately trained pediatrican.

































Genetic Predisposition to Visual Engagement? SJ.Z \mathcal{P} Nature. 2017 July 20; 547(7663): 340-344. doi:10.1038/nature22999. Infant viewing of social scenes is under genetic control and atypical in autism John N. Constantino^{1,2,3}, Stefanie Kennon-McGill¹, Claire Weichselbaum¹, Natasha Marrus^{1,3}, Alyzeh Haider¹, Anne L. Glowinski¹, Scott Gillespie⁴, Cheryl Klaiman^{5,6}, Ami Klin^{5,6,7}, and Warren Jones^{5,6,7} g h CC Values: Twin-Twin Concordance DZ Twins 00 2000 0 02 04 06 08 1 Ne ent & Cons 38











Characteristic Cognitive Impairments to Evaluate in ASD

- The ability to attribute mental states to oneself and others.
 The ability to display emotional reaction appropriate to another person's mental state (joint attention of emotion).
 The ability to plan and attend to relevant details in the environment.
 The ability to understand the communicative content of gaze.
 The ability to understand, comprehend, analyze, synthesize, evaluate and differentiate in particular social information in the environment.



Core DSM and ICD Core ASD Symptoms in All Ages

- Impaired social relations.
- Impaired communication skills.
- Impaired behavior.



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Symptoms Present Before 24 Months

Children with ASD Struggle to:

- Orient to name
- Attend to human voice
- Look at face and eyes of others
- Imitate
- Show objects
- Point
- Demonstrate



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Symptoms Present Before 36 Months

Children with ASD:

- Use of other's body to communicate or as a tool
- Stereotyped hand/finger/body mannerisms
- Ritualistic behavior
- Failure to demonstrate pretend play
- Failure to demonstrate joint attention



Autism is now referred to as a spectrum disorder in which individuals can present problems ranging from total impairment to near reasonable functioning.

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In a Spectrum Disorder genetic and phenotypic factors predispose certain individuals to express certain Central Nervous System vulnerabilities leading to poorly adapted variations in development and behavior.

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In a Spectrum Disorder all symptoms are considered relevant to the extent they present in each disorder. Thus a symptom is not exclusive to a disorder. The form that a Spectrum Disorder assumes is determined by its composite symptoms. These symptoms often have complex relationships.

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DSM 5 Autism Spectrum Disorder

- Combined social and communication categories.
- Tightened required criteria reducing the number of symptom combinations leading to a diagnosis.
- Omitted Retts and Childhood Disintegrative Disorders.
- Clarifies co-morbidity issues.
- Eliminated PDD NOS and Aspergers in favor of Autism Spectrum Disorder.
- Created Social Pragmatic Communication Disorder.
- Still no specified profile for adults, just guidelines.

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DSM 5 Autism Spectrum Disorder

• Five criteria.

- Seven sets of symptoms in the first two criteria Social/Communication and Restrictive/Repetitive behaviors, interests or activities.
- All three symptoms are required to meet the first criteria (although a typo omits this).
- Two out of four are needed for the second criteria.
- Some symptoms have been combined.
- Sensory sensitivity has been added.

DSM 5 ASD Criteria A

Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive; see text):

- Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
- Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication, to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication. з.
- Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in

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DSM 5 ASD Criteria B

- Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
- Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day). 2
- Hous every usy.
 A Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
 A. Hyper- or hypo-reactivity to sensory input or unusual interest interests of the environment (e.g., apparent indirence to pain/enerature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

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DSM 5 Autism Spectrum Disorder

• Specify if:

With or without accompanying intellectual impairment.

- With or without accompanying language impairment.
- Associated with a known medical or genetic condition or environmental factor.
- Associated with another neurodevelopmental, mental, or behavioral disorder.

With catatonia.

DSM 5 ASD Criteria C, D, E. 9. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life) 9. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning. 10. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability (intellectual disorder) frequently co-occur to make co-mobile diagnoses of autism spectrum disorder frequently co-occur to make co-mobile diagnoses of autism spectrum disorder in the lectual disability, social communication should be below that expected for general developmental level.

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Applying DSM 5 With Adults (page 54)

- "Many adults with ASD without intellectual or language disabilities learn to suppress repetitive behavior in public."
- "Special interests may be a source of pleasure and motivation and provide avenues for education and vocation later in life."
- "Diagnostic criteria may be met when restricted, repetitive patterns of behavior, interests or activities were clearly present during childhood. . . even if symptoms are no longer present."
- "Among adults with ASD with fluent language, the difficulty in coordinating non-verbal communication with speech may give the impression of add, wooden or exaggerated body language."

Applying DSM 5 With Adults (page 56-57)

- Symptoms are "clear in the developmental period."
- "In later life interventions or compensations, as well as current supports, may mask these difficulties in at least some contexts."
- "However symptoms remain sufficient to cause current impairment in social, occupational or other important areas of functioning."
- "ASD is diagnosed four times more often in males than females."
- "Girls without accompanying intellectual impairment or language delays may go unrecognized."

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DSM IV TR Autism and Asperger Syndrome

Data from the Autism Spectrum Rating Scales Epidemiologic Sample (2009)

















Google	Questionnaires to evaluate adult Autim	٩	
	All Images News Videos Shopping More	Settings Tools	
	About 5,110,000 results (0.58 seconds)		
	Showing results for Questionnaires to evaluate adult Autise Search instead for Questionnaires to evaluate adult Autim	n	
	Take the Autism Test for Adults: Do I Have Symptoms of A	utism	
	https://www.additudemag.com/screener-autism-spectrum-disorder-sympto [Self-Test] Autism Spectrum Disorder Symptoms in Adults This free test was a	ms-test-adults/	
	Autism Spectrum Screening Questionnaire (ASSQ) designed to		
	People also ask		
	Is there a test for autism in adults?	~	
	Can I test myself for Autism?	~	
	What are the 5 different types of autism?	~	
	The second and the second		

Google It!	Conducting an Evaluation for ASD	
	ARC Tests - Autism Research Centre https://www.autismresearchicetine.com/wite_jasts * Adult Agerger Aussessment (AuX) Click to www Childhood Autism Spectrum Test (CAST) Click to wwwSocial Strong Sociationing (SSQI Click to wine.	
	Assessing Autism in Adults: An Evaluation of the Developmental https://www.chclim.nih.gov/prov/sitis/GV/96/SIS/9695 • . by Wuo/_2711- Cetty 3 - yained and the offer and Developmental EuropeanAl 30-Adult Interview for Mill past attender XC cares were conducting for besiden ty	
	Quick Autism Test-2 Minutes. Instant Results Psych Central https://psychomiat.com/pazzes/autom/quiz/ * A quick scientific automism test to obtaining fyrounging quility for a disprosi of Autism or Aupargur's Syndrom. It later more propries fram 27 minutes to this	
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	Take the Autism Test for Adults - 15 Mins Instant Score Online https://www.adismag.org/autism-test-for-adults/ •	

https://www.autismresearchcentre.com/arc_tests
Downloadable Tests
Various tests have been devised by ARC for use in the course of our research. Some
of these tests are made available here for download.
You are velocine to download that they are used for genuine
research purposes, and provided due acknowledgement of ARC as the source is
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source of our test-are made these tests provided that they are used for genuine
research purposes, and provided due acknowledgement of ARC as the source is
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as the National Autistic Society (NKS) or equivalent charity

https://www.autismresearchcentre.com/arc_tests

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	Adult Asperger Assessment (AAA)	Empathy/Systemizing Quotient (EQ-SQ) (Child) 🔹
	Autism Spectrum Quotient (AQ) (Adult) 👻	The EU-Emotion Stimulus Set 👻
	Autism Spectrum Quotient - 10 items (AQ-10) (Adult)	Eyes Test (Adult) 🔻
	Autism Spectrum Quotient (AQ) (Adolescent)	Eyes Test (Child) 🔻
	Autism Spectrum Quotient - 10 items (AQ-10) (Adolescent)	Faces Test 💌
	Autism Spectrum Quotient (AQ) (Child)	Faux Pas Test (Adult) 👻
	Autism Spectrum Quotient - 10 items (AQ-10) (Child)	Faux Pas Test (Child) 🔻
	Cambridge Mindreading (CAM) Face-Voice Battery	Friendship and Relationship Quotient (FQ) 🔹
	Checklist for Autism in Toddlers (CHAT)	Intuitive Physics Test 🔻
	Quantitative Chaeldist for Autism in Teddlers (O.CHAT) -	Coherence Inferences Test 🗸
	Quantitative Checklist for Automin Toddlers (Q-CHAT)	Physical Prediction Questionnaire (PPQ) 🔹
	Quantitative Checklist for Autistif III foldulers - To items (Q-CHAI-TO)	Picture Sequencing Test 🔹
	Childhood Autism Spectrum Test (CAST)	Reading the Mind in the Voice Test 🛛 👻
	Empathy Quotient (EQ) for Adults 👻	Reading the Mind in Films Test 🔹
	Empathy Quotient (EQ) for Adolescents 👻	Revised Test of Genuineness (TOG-R) 🔹
L	Empathy/Systemizing Quotient (EQ-SQ) (Child)	Sensery Derestion Quetient -

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Cambridge Behavioural Scale 1.cccccll umm if the second s

9. I am at my best first thing in the morning.

I try to keep up with the current trends and	strongly	slightly	slightly	strongly
fashions.	agree	agree	disagree	disagree
 I find it difficult to explain to others things that I understand easily, when they don't understand it first time. 	strongly agree	slightly agree	slightly disagree	strongly disagree
5. I dream most nights.	strongly	slightly	slightly	strongly
	agree	agree	disagree	disagree
6. I really enjoy caring for other people.	strongly	slightly	slightly	strongly
	agree	agree	disagree	disagree
 I try to solve my own problems rather than	strongly	slightly	slightly	strongly
discussing them with others.	agree	agree	disagree	disagree
 I find it hard to know what to do in a social	strongly	slightly	slightly	strongly
situation.	agree	agree	disagree	disagree

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Autism Spectrum Disorder as Reflected in the Autism Spectrum Rating Scales (Goldstein and Naglieri, 2009) Exploratory and Confirmatory Factor Analyses

Validity of the Factors

- Factor analysis is a valuable tool to understand how items group.
- But we also need to know if the items have validity, that is do they measure what they purport to measure?
- Discriminating individuals with ASD from the regular population is important.
- Discriminating individuals with ASD from those who are not in the regular population (e.g. they suffer from other conditions) but not ASD is equally important.

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ASRS Profiles

- A scale like the ASRS should differentiate adults with ASD from the normal population.
- Comparison to regular individuals should demonstrate that those with ASD have high scores.
- Comparisons to other clinical groups should also show differences from those with ASD.
- Comparisons of the ASD to regular and other clinical samples provides an essential examination of validity.



























Pretend Play in Autism

Limited, often absent

 When present usually characterized by: repetitive themes, rigidity, isolated acts, one-sided play, limited imagination.

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Evaluating Compensatory Behaviors: Social Camouflage in ASD

- Social camouflaging is defined as the use of strategies by autistic people to minimize the challenges of autism during social situations (Lai et al. 2011).
- Social camouflage has recently been a focus of researchers, but has been recognized by clinicians as coping strategies. It is now recommended that clinicians evaluate masking or coping behaviors when assessing autism in the newly released 11th edition of the International Classification of Diseases (Zeldovich 2017).
- This phenomena may be a widespread in ASD, especially in intellectually strong individuals.

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Social Camouflage in ASD

- Social camouflaging reflects an explicit effort to 'mask' or 'compensate' for autistic characteristics; and to use conscious techniques to minimize an autistic behavioral presentation (Hull et al. 2017; Lai et al. 2017; Livingston and Happé 2017).
- Examples of camouflaging behaviors described in the current literature include as example: forcing oneself to make eye contact during a social interaction; pretending that one is doing so by looking at the space between someone's eyes or at the tip of their nose; or using working memory strategies to develop a list of appropriate topics for conversation.

Social Camouflage in ASD: Unanswered Questions

- Do autistic females camouflage more than males, and does this partly account for gender disparities in the rate and timing of diagnosis (Begeer et al. 2013; Loomes et al. 2017)?
- What is the relationship between camouflaging and mental health outcomes?
- How should camouflaging be accurately measured? Is a discrepancy method sufficient to assess the the gap between how a person with ASD mediates their internal autistic status and their overt behavior (external autistic presentation)?

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Measuring Social Camouflage

Livingston and Happé (2017) suggest that camouflaging is a component of social compensation.

The "processes contributing to improved behavioral presentation of a neurodevelopmental disorder such as ASD, despite persisting core deficit(s) at cognitive and/or neurobiological levels".

As such they should be measured at the behavioral, cognitive, and even neurobiological levels.

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Performance on tests of cognition relevant to autism, or scores on self-reported measures of autism traits can only serve as a proxy measure of internal autistic status.

Measuring Social Camouflage

- An alternative to the discrepancy approaches is one based on observational recognition of camouflaging; measuring the specific behaviors and experiences which represent camouflaging.
- Observational/reflective methods circumvent the limitation of being unable to measure an individual's internal autistic state. Camouflaging can be measured consistently and compared between individuals, and behaviors can be identified regardless of how successful they may be.
- This approach to camouflaging has the advantage of allowing for variation in camouflaging behaviors and their success. Techniques learned and used in some situations may not be successful in others.
- An individual's overall camouflaging skill may partly depend on their flexibility/generalizable capacity to adapt to different situations.

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Measuring Social Camouflage

- Both the discrepancy and observational/reflective approaches offer ways to define and measure camouflaging in ASD.
- All the methods used or suggested have their own strengths and weaknesses, thus combining multiple methods may allow for greater accuracy in measuring and identifying a complex phenomenon such as camouflaging.

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Camouflaging Autistic Traits Questionnaire (CAT-Q)

- Compensation
- Masking
- Assimilation

Laura Hull , William Mandy, Meng-Chuan Lai, Simon Baron-Cohen, Carrie Allison, Paula Smith & K. V. Petrides. Development and Validation of the Camouflaging Autistic Traits Questionnaire (CAT-Q) Journal of Autism and Developmental Disorders. doi.org/10.1007/s10803-018-3792-6

Social Camouflage: Compensation

- Copy others facial expression or body language.
- Learn social clues from media.
- Watch others to understand social skills.
- Repeat others phrasing and tone.
- Use script in social situations.
- Explicitly research the rules of social engagement.

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Social Camouflage: Masking

- Monitor face and body to appear relaxed.
- Adjust face and body to appear relaxed.
- Monitor face and body to appear interested in others.
- Adjust face and body to appear interested in others.
- Pressured to make eye contact.
- Think about impression made on others.
- Aware of impression made on others.

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Social Camouflage: Assimilation

- Feel a need to put on an act.
- Conversation with others is not natural.
- Avoid interacting with others in social situations.
- "Performing" e.g. not being oneself in social situations
- Force self to interact with others.
- Pretending to be normal.
- Need support of others to socialize.
- Cannot be oneself while socializing.













ASD vs Communication Disorders

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ASRS Race Ethnic Differences Table 8.26. Differences between Race/Ethnic Groups: ASRS (6-18 Years) Parent Ratings wh 49.3 0.5 536 49.1 0.5 536 49.4 0.5 536 45.7 1.0 128 0.14 0.31 46.4 0.9 128 45.6 0.9 128 128 46.1 0.15 0.24 0.11 0.33 49.1 0.10 0.26 128 536 49.7 0.5 549 0.13 0.37 101







Intervention

- Despite strong claims no curative treatment has been studied vigorously.
- "In the absence of a definitive cure there are a thousand treatments" (Klin).
- Behavior modification, educational intervention and pharmacology have been studied.

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	http://autismpdc.fpg.unc.edu/content/briefs_				
	EVIDENCE-BASED PRACTICES FOR CHILDREN AND YOUTH WITH ASD				
i i	Antecedent-Based Interventions (ABI)				
	Computer-Aided Instruction				
	Differential Reinforcement				
	Discrete Trial Training				
	Extinction				
	Functional Behavior Assessment				
	Networked Internation				
	Raturalistic Intervention				
	Parentering interventions and intervention				
	Picture Exchange Communication System (PECS)				
	Pivotal Response Training				
	Prompting				
	Reinforcement				
	Response Interruption/Redirection				
	Self-Management				
	Social Narratives				
	Social Skills Groups				
	Speech Generating Devices/VOCA				
	Structured Work Systems				
	Task Analysis				
	Video Medaling				
	Viceo incoening Viceo incoening				
	visual supports	105			

Considering Co-morbidity

- Considerable overlap exists between autism spectrum disorder (ASD) and mental health disorders.
- High rates of overlap are significant because they affect the nature and type of problems displayed by persons
 with ASD and how the disorders are assessed.
- ADHD, anxiety disorders and depression are among the disorders most commonly associated with ASD.
- Symptom presentation is similar whether ASD occurs alone or with other conditions.
- Multiple assessments after initial diagnosis of ASD are frequently necessary.
- ASD can be diagnosed very early, while symptoms of other disorders emerge at different points in human development.

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Components of an Effective Treatment Program

- Structured behavioral treatment
- Parent involvement
- Treatment at an early age
- Intensive intervention
- Social skill development
- Focus on generalization of skills
- Appropriate school setting
- Medication?

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Medications Symptom focused medic

- Symptom focused medications: stimulants for attention, anti-depressants for mood, anti-psychotics for "oddities".
- Condition focused medications?



New Drug May Treat ASD State Transformer May Treat ASD May Treat ASD May Treat Car Base Composition Co	The V Table of Gamma 2017 The V Table of Gamma 2017 The V Table of Gamma 2017 ACI ANTOL ACI ANT	109

Psychostimulants for ADHD-like symptoms in individuals with autism spectrum disorders. Cortese S, Castelnau P, Morcillo C, Roux S, Bonnet-Brilhault F.

Institute for Pediatric Neuroscience, NYU Child Study Center, Langone Medical Center, 215 Lexington Avenue, 14th Floor, 10016 NY, USA. <u>samuele cortexe@email.com.</u> Expert Rev Neurother. 2012 Apr;12(6):461-73.

Expert new investment. All J April 14 (Nex) - 14 We conducted a competencies of studies assessing the efficacy and tolerability of psychostimulants for ADDD like symptoms in individuals with autom spectrum disorder (encompassing autom disorder, Adverger's December, Rich and Ottel were exacted through J hanvary 2017, From a pool of all obstrationary relevant references, 12 classions (13 studies) were retained as perfinent. Four of the included studies had a randomized controlled decign, Nota of the studies assess and mshiphonidate immediate relevant. Despin inter study for ADDD like symptoms in autom spectrum disorder individuals. The most common adverse events reported in cludies that were applicate reduction. See non-studies, studies had a studies had a studies for ADDD like symptoms in autom spectrum disorder individuals. The most common adverse events reported in cludies that were applicate reduction. See non-studies for studies is assessing more ecological outcomes and downer disorder disorders and the spectrum disorder strates.

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Positive Effects of Methylphenidate on Social Communication and Self-Regulation in Children with Pervasive Developmental Disorders and Hyperactivity

Laudan B. Jahromi, Connie L. Kasari, James T. McCracken, Lisa S-Y. Lee, **et. al**. Journal of Autism and Developmental Disorders, 2009)

Drugs that increase serotonin transmission may be useful in reducing interfering repetitive behaviors and aggression as well as improving social relatedness (few controlled studies).

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Promoting Social Behavior With Oxytocin in High-Functioning Autism Spectrum Disorders

- Published (2/10) online in the Proceedings of the National Academy of Sciences.
- Oxytocin is a hormone known to promote mother-infant
- bonds.
- A French research group investigated the behavioral effects of oxytocin in 13 subjects with autism.
- Under oxytocin, children with ASD responded more strongly to others and exhibited more appropriate social behavior and affect, suggesting a therapeutic potential of oxytocin through its action on a core dimension of autism.

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Comorbid ADHD and Anxiety Affect Social Skills Group Intervention Treatment Efficacy in Children With Autism Spectrum Disorders

Kevin M. Antshel, PhD, Carol Polacek, PhD, NP, Michele McMahon, CSW, Karen Dygert, NP, Laura Spenceley, MA, Lindsay Dygert, BS, Laura Miller, BA, Fatima Faisal

ABTIGAT: Objective Tassess the influence of psychiatric comorbidity on social skill treatment outcomes for children with aution spectrum disorders (ASDA, Methods A community sample of 35 children (74 males, 9 females) with an AD (menange = 35 yrs 50 = 12) and common comorbid disorders participated in 10 week social skills training groups. The first 5 weeks of the group focused on conversion skills and the second 5 week focused on social problem solving skills. A concurrent parent group was in included in the treatment Social skills were assessed using the Social Skills frating System. Ratings were completed by parents at pre- and potentiament time produce. Rest: Children with AG 20 and children with an AD 20 and attention deficit/hyperactivity disorder failed to improve. Conclusion: Psychiatric comorbidity affects social skill treatment gines in the ASD population.

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Some Possible Challenges to Counseling Youth With ASD

- Concrete thinkers
- Difficulty with humor
- Problems regulating affect
- Difficulty interpreting other's feelings
- Rule bound
- Diminished empathy
- Decreased desire to please others.















The first randomized, controlled trial for comprehensive autism treatment for children as young as 18 months old.

While certainly not a cure for the condition, the study did find that intense early treatment yields major improvements in IQ scores, language processing, and in the ability to manage everyday tasks essential for early childhood development and education.

Published in Pediatrics the University of Washington study was funded by the National Institute of Mental Health. It involved 48 children ages 18 to 30 months, half of whom were randomly assigned to receive the Early Start Denver Model, an intensive autism therapy protocol. The other half were assigned to a control group and received less intensive therapy.

After two years, those who participated in the Denver Model group had average IQ scores 17.6 points higher than the control group, putting them within the range of normal intelligence, while those in the other group gained just seven points, remaining in the zone of intellectual disability.

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The "Prime Directive" is Independence

- Reduce reliance on prompts.
- Help individual's predict and control. environment and behavior.
- Increase self-esteem and self-efficacy.
- Develop independence through a "learning to swim" mindset.

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Theater as a Medium to Develop Social Skills

- Theater arts offer an opportunity for individuals with ASD to venture into the community in a win-win relationship.
- EPIC's performances help the general community better understand the nature of having ASD.
- At the same time, actors with ASD have the opportunity to interact in a medium that we believe will foster not only the development of selfesteem, but appropriate social interaction—the latter very clearly being the primary hurdle to successful adult transition for those with ASD.
- EPIC hopes to quantify our initial experiences of the benefits of theater for those with ASD through a long-term, qualitative study measuring the associative effects of theater arts, training on social skills, sense of purpose and independence in daily life activities.

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