TEASING OUT SYMPTOMS OF SOCIAL COMMUNICATION DISORDER FROM OTHER PSYCHIATRIC LABELS

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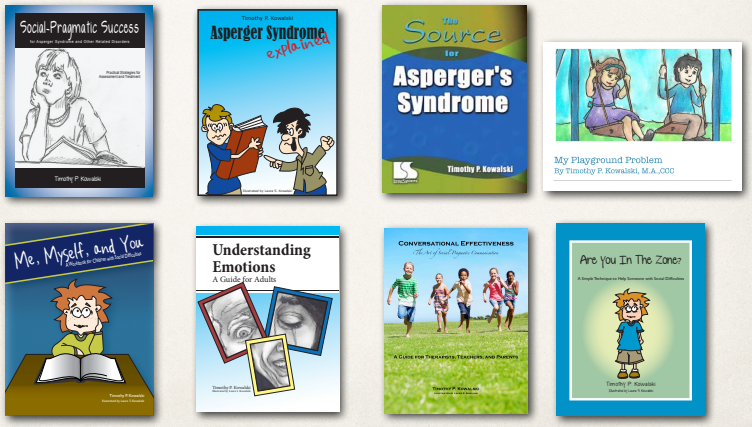
Disclosure

- Timothy P. Kowalski:
  - direct financial relationships: intellectual property
  - indirect financial relationships: immediate past president, FLASHA

My Books



Social (Pragmatic) Communication Disorder

- The condition first appeared in the Diagnostic and Statistical Manual (DSM-5) in 2013
- Prior to that, people exhibiting its symptoms were commonly diagnosed on the autism spectrum
- *Social communication* encompasses more than the spoken word. It also includes social cognition, pragmatics, non-verbal communication, and language processing.
- Individuals with SCD may struggle to vary speech style; use different components of language like vocabulary, syntax and phonology; understand the rules of communication; and share perspectives

DSM5

Social (Pragmatic) Communication Disorder Criterion A

- Deficits in using communication for social purposes, such as greeting and sharing information, in a manner that is appropriate for the social context.
- Impairment of the ability to change communication to match context or the needs of the listener, such as speaking differently in a classroom than on a playground, talk ing differently to a child than to an adult, and avoiding use of overly formal language.
- Difficulties following rules for conversation and storytelling, such as taking turns in conversation, rephrasing when misunderstood, and knowing how to use verbal and nonverbal signals to regulate interaction.
- Difficulties understanding what is not explicitly stated (e.g. - making inferences) and nonliteral or ambiguous meanings of language (e.g. - idioms, humour, metaphors, multiple meanings that depend on the context for interpretation).

Social (Pragmatic) Communication Disorder Criterion B

- The deficits result in functional limitations in effective communication, social participation, social relationships, academic achievement, or occupational performance, individually or in combination.

Criterion C

- The onset of the symptoms is in the early developmental period (but deficits may not become fully manifest until social communication demands exceed limited capacities).

Criterion D

- symptoms are not attributable to another medical or neurological condition or to low abilities in the domains of word structure and grammar, and are not better explained by autism spectrum disorder, intellectual disability, global developmental delay, or another mental disorder.

- May be considered as a diagnosis only after 4–5 years of age
  DSM5; Swineford LB, Thurm A, Baird G, Wetherby AM, Swedo S. (2014). Social (Pragmatic) Communication Disorder: A Research Review of This New DSM-5 Diagnostic Category. J Neurodev Disord. 6:41
- Although guides to DSM-5 mental status examinations involve sample interview questions for SCD (ie, introducing one's self and greetings) there are no widely used valid and reliable diagnostic instruments Nussbaum AM. 2013. The DSM-5 Diagnostic Interview The Pocket Guide to the DSM-5 Diagnostic Exam. Washington, DC: American Psychiatric Publishing.

Autism spectrum disorder must be ruled out in order for SCD to be diagnosed

But what do we know about *hf*ASD?

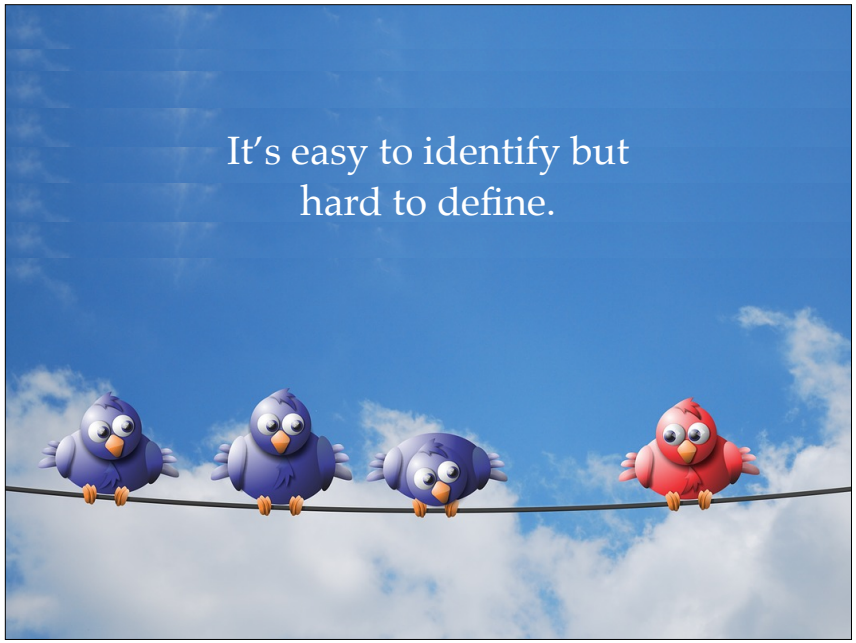
9

- Adults or peers?
- Quiet or loud environment?
- 1:1 or group?

- Now think about your testing environment
  - Can results be impacted?

10

11



12

13

Why is it misdiagnosed?

- Social (Pragmatic) Communication Disorder can be very complex to understand, which can unfortunately result in high levels of misdiagnosis

  – especially in adults!

- It may be impacted by the presence of other disorders which may overlap with, overshadow, or mimic one another

14

SCD is typically diagnosed in childhood

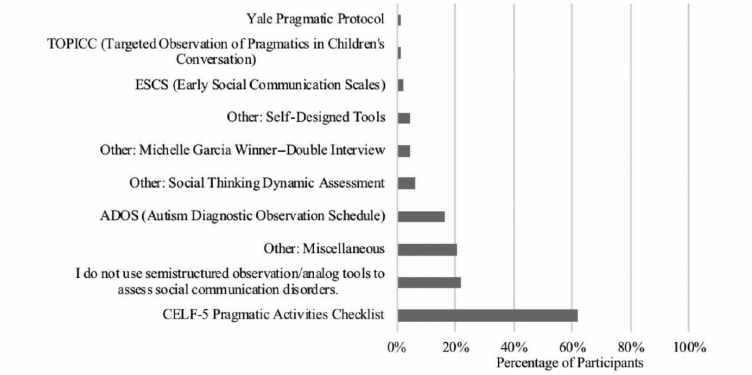
- BUT…it is possible for clinicians and parents to miss or overlook the symptoms until late childhood, adolescence, or even adulthood
- One of the biggest challenges is the co-occurrence of other disorders. Norbury CF. 2014. Practitioner Review: Social (Pragmatic) Communication Disorder Conceptualization, Evidence and Clinical Implications. J Child Psychol Psychiatry. 55:204–216
  - About 70% to 80% of people with milder forms of ASD are also diagnosed with another psychiatric condition
  - More than half of young autistic children have four or more other conditions Fusar-Poli, L., Brondino, N., Politi, P., & Aguglia, E. 2022. Missed Diagnoses and Misdiagnoses of Adults with Autism Spectrum Disorder. Arch Psychiatry Clin Neurosci. 272:187-198

15

- Does it really exist?
- Social-Pragmatic Communication deficits are seen in a wide variety of diagnoses:
  - Use of second language
  - ASD
  - Schizophrenia
  - Paranoia
  - ADHD
  - Bipolar
  - Depression

16

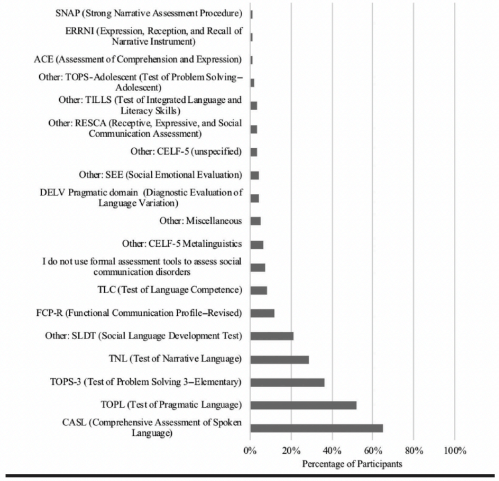
Figure 1. Semistructured assessment tools that participants use to assess social communication disorders (*n* = 92). Note that two participants did not respond to this question (P2 and P44). CELF-5 = Clinical Evaluation of Language Fundamentals–Fifth Edition.



Izaryk, K., Edge, R., and Lechwar, D. 2021. A Survey of SLP's Approaches to Assessing Social Comm. Disorders in Children. Perspectives of the ASHA Special Interest Groups. 6: 1–17

17

Figure 2. Formal assessment tools that participants use to assess social communication disorders (*n* = 94). CELF-5 = Clinical Evaluation of Language Fundamentals–Fifth Edition.



Izaryk, K., Edge, R., and Lechwar, D. 2021. A Survey of SLP's Approaches to Assessing Social Comm. Disorders in Children. Perspectives of the ASHA Special Interest Groups. 6: 1–17

18

Sources and Numbers for Items That Two Raters Mapped to the ments for People With Level

Aim 1: To Identify Measurement Tools and Items Used in Assessing PLI and Related Disorders

Category A1: Using communication for social purposes, as appropriate for social context	
ADI-R	34, 36, 52, 54, 55
ADOS-2 Module 3	A5, A6, B5
ADOS-2 Module 4	A5, A6, B4, B5, B6
CCC-2	70
SCQ-Lifetime	20, 22, 28, 29, 30, 31
Category A2: Adapting communication to context or listener needs	
ADI-R	66
ADOS-2 Module 3	B11
CCC-2	5, 18, 23, 28, 48, 59
CSBQ	40
TOPICC	4, 5, 12
TOPL-2	15, 37
Category A3: Following rules and using signals to regulate interaction	
ADI-R	31, 35, 43, 44, 45, 46, 50, 56, 57, 58
ADOS-2 Module 3	A8, A9, B1, B2, B3
ADOS-2 Module 4	B1, B2, B3
CCC-2	8, 14, 20, 21, 35, 42, 45, 46, 53, 56, 61, 65, 68
CSBQ	1, 4, 13, 16, 21, 34, 43
SCDC	7, 11
SCQ-Lifetime	9, 23, 24, 25, 26, 27, 32, 33, 37, 38
TOPICC	1, 2, 3, 6, 7, 9, 11, 13
TOPL-2	5, 9, 13, 22, 30, 33, 39

Yuan, H. and Dollaghan, C., 2018

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Pages: 647-656

19

20

Masking

- normal to super gifted intelligence allows one to hide their difficulties
- issues arise when schoolwork becomes more abstract, demanding, and verbal and when social interactions become more complex

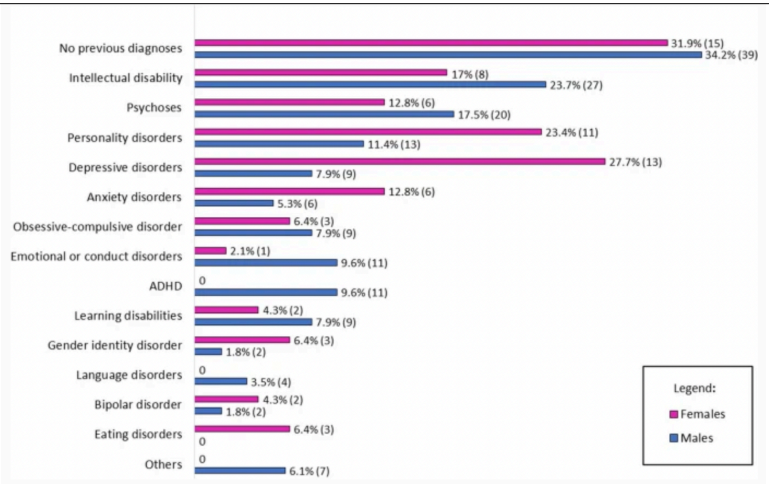
21

Misdiagnosis

- more common than you think
- often mistaken for ADHD
  - 10.3% of adults with autism were incorrectly diagnosed with ADHD as children, while 12.1% of children initially diagnosed with ADHD were subsequently diagnosed with autism

Kentrou V, De veld DM, Mataw KJ, et al., 2019

22



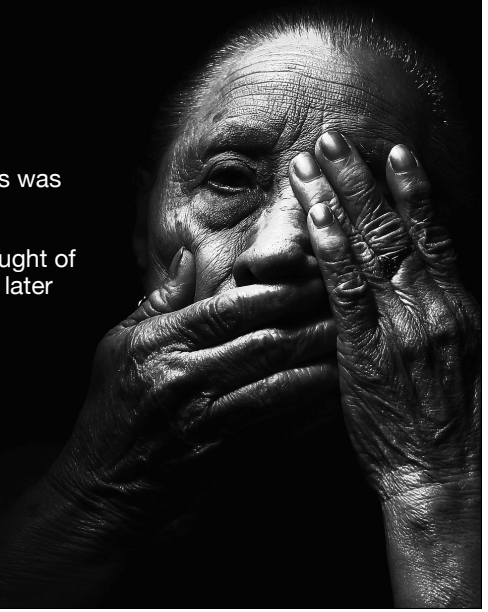
Proportion (%) and raw numbers (*n*) of past psychiatric diagnoses in adult males and females with ASD. *ADHD* attention deficit-hyperactivity disorder

Fusar-Poli, L, Brondino, N., Politi, P., and Aguglia, E. (2020). Missed Diagnoses and Misdiagnoses of Adults with Autism Spectrum Disorder. European Archives of Psychiatry and Clinical Neuroscience. 272: 187–198

23

Age

- born before the diagnosis was present
- they may never have thought of seeking a new diagnosis later on



24

Female

- Four times as many boys and men are diagnosed with autism than women and girls, but the reasons are not clear Jacquemont S, Coe BP, Hersch M, et al., 2014
- Are girls really less likely to be autistic? Or are their behaviors (apparent shyness, discomfort with public speaking, difficulties with motor coordination, confusion over social communication in situations such as team sports) considered "feminine" rather than problematic?
- Often exhibit more internalizing than externalizing symptoms leading to misdiagnosis
- The theory suggests that symptoms of autism manifest differently in women and girls and that females tend to demonstrate better functional social behavior compared to males with autism Halladay AK, Bishop S, Constantino JN, et al., 2015

25

Socio-Economics

- Those from poorer and/or minority backgrounds are often underdiagnosed with autism with as many as 25% undiagnosed, Wiggins, L, Durkin, M. et al 2019
- There seem to be two major reasons for this disparity
  - Poor have less access to behavioral healthcare Khowaja MK, Hazzard AP, Robins DL., 2015
  - Cultural differences: In some communities, the behaviors associated with SCD are not considered to be particularly problematic Jo, H., Schieve, L., Rice, C. et al., 2015

26

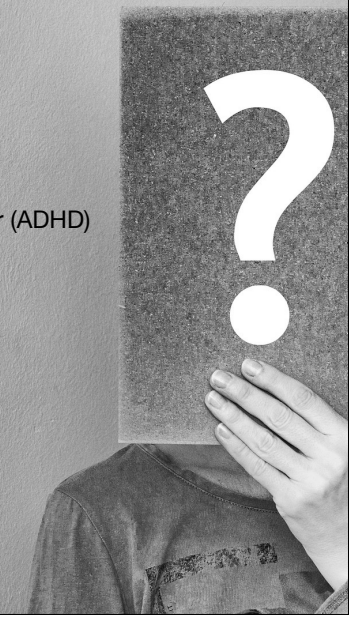
Comorbidity

- 20% had anxiety disorders
- 11% had depressive disorders
- 9% had obsessive-compulsive disorder (OCD)
- 5% had bipolar disorder
- 4% had schizophrenia spectrum disorder

27

Common Misdiagnoses

- anxiety
- attention deficit hyperactivity disorder (ADHD)
- mood disorders
- personality disorders
- OCD
- PTSD
- intellectual disability
- psychosis
- depression



28

ANXIETY

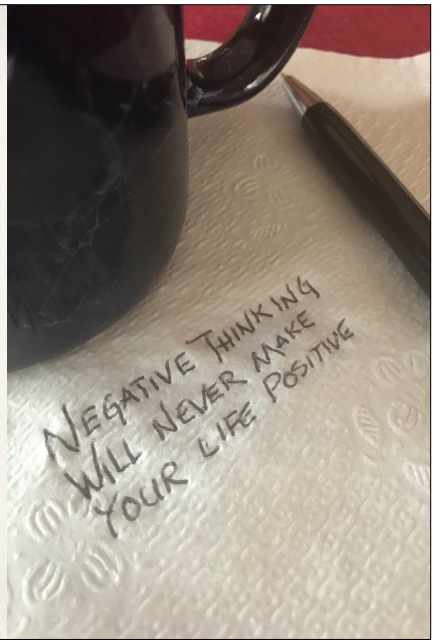
29

- 69% of those with ASD had clinically-significant anxiety Kerns, C., Winder-Patel, B. Iosif, A., Nordahl, C. et al. 2021.Clinically Significant Anxiety in Children with Autism Spectrum Disorder and Varied Intellectual Functioning, Journal of Clinical Child & Adolescent Psychology, 50: 780-795
- Many are first diagnosed with anxiety disorder as symptoms often are mistaken:
  - strong need for routine
  - difficulty with abrupt or unanticipated transition
  - sensory meltdowns can look like an anxiety disorder. In addition
- if a person has experienced backlash due to difficulty interpreting social cues, they likely become highly anxious in social settings
  - if someone notices that their anxiety stems from unpredictable conversations or difficulty picking up body language and voice tone, the anxiety might be secondary to autism
  - if someone is diagnosed with generalized anxiety disorder and finds that their “anxious” behaviors do not accompany nervous behaviors, it is possible that they have been misdiagnosed.

30

Challenge Your Negative Thinking

Anxiety is all in your head!



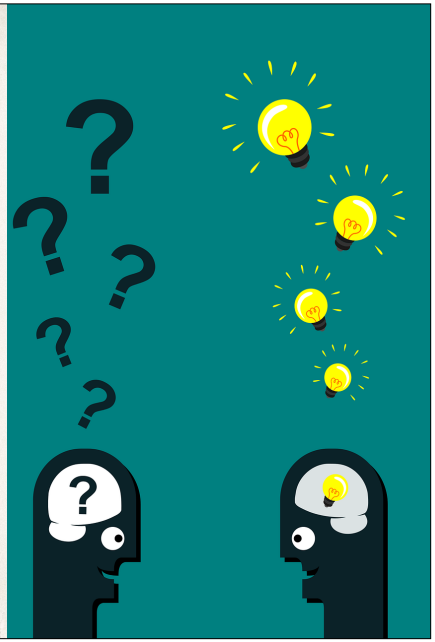
31

Common Negative Thoughts

32

Mind Reading

- assuming you know what others are thinking and they see you in the same negative way that you see yourself



Fortune Telling

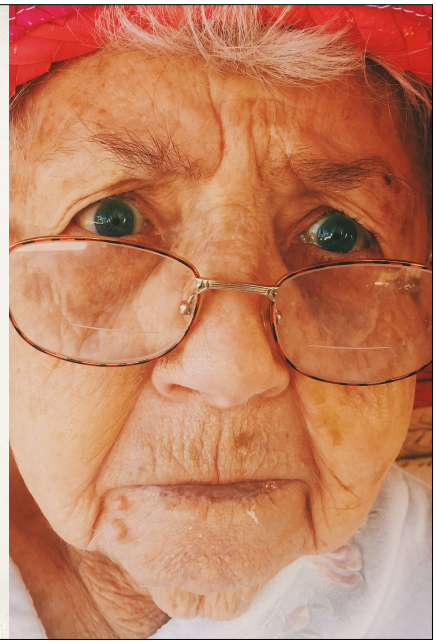
- predicting the future, usually while assuming the worst will happen
- you just "know" that things will go horribly, so you're already anxious before you're even in the situation

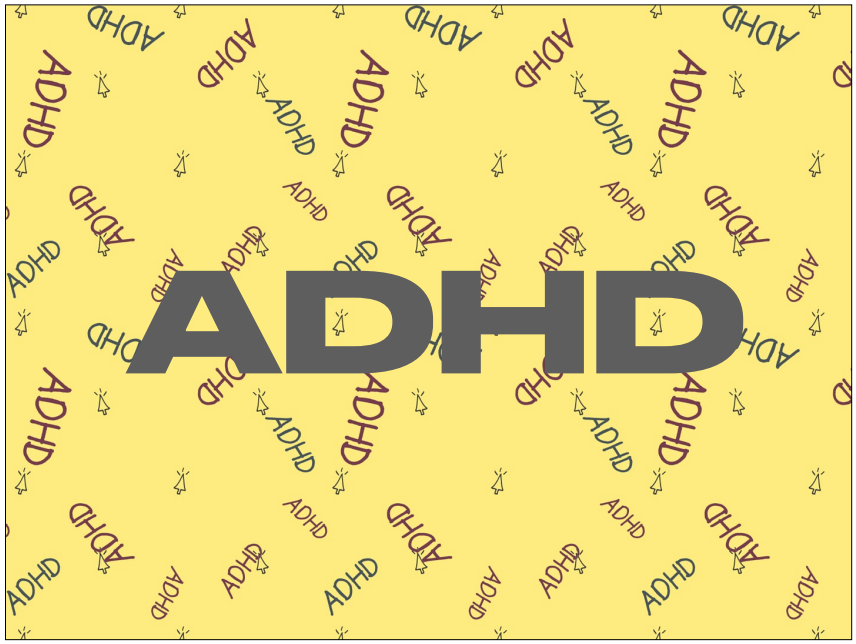
Catastrophizing

- Blowing things out of proportion
- example: if people notice that you're nervous, it will be "awful", "terrible", or "disastrous"

Personalizing

- assuming that people are focusing on you in a negative way or that what's going on with other people has to do with you





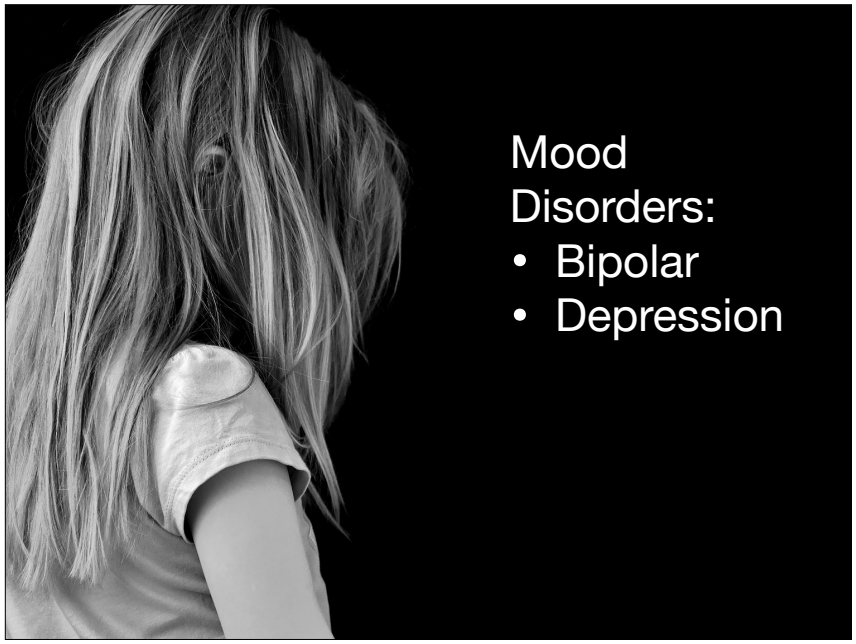
37

- ADHD is a neurodevelopmental disorder characterized by developmentally inappropriate and impairing symptoms of inattention, hyperactivity, and impulsivity. DSM-5, 2013
- These symptoms may lead to difficulties in social interaction and communication
  - Inattention may lead to missed cues in communication
  - Hyperactivity/impulsivity may lead to problems in waiting for conversational turns.
  - Symptoms from all domains may cause problems in modulating communication style according to the other's needs Bellani M, Moretti A, Perlini C, Brambilla P., 2011

38

SCD		ADHD
Focusing on non-preferred activities may be difficult but hyper-focus on activities of high interest.	Focus	Individuals may hyper-focus, but prefer tasks that do not require sustained focus.
Poor use and recognition of social cues	Social Cues	May have difficulty with "filtering" what thoughts they want to share. They might interrupt frequently or
Might experience increased stress due to change in procedure	Anxiety	Thrive with a consistent routine but may struggle to follow a routine due to disorganization.
>13	Social Communication Questionnaire (SCQ)	<13
May not have positive outcomes	Pharmacology	Good outcomes due to social difficulty secondary to ADHD

39



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- There is symptom overlap between ASD and Mood Disorders
  - emotion recognition Cath DC, Ran N, Smit JH, van Balkom AJ, Comijs HC. 2008. Symptom Overlap Between Autism Spectrum Disorder, Generalized Social Anxiety Disorder And Obsessive Compulsive Disorder In Adults: A Preliminary Case-Controlled Study. Psychopathology. 41:101-110
  - avoidance of social situations, withdrawal, impairments in reciprocal social interaction and reduced eye contact Hartley SL, Sikora DM. 2009. Sex Differences In Autism Spectrum Disorder: An Examination Of Developmental Functioning, Autistic Symptoms, And Coexisting Behavior Problems In Toddlers. J Autism Dev Disord. 39:1715-1722; Tyson KE, Cruess DG. 2012. Differentiating High-Functioning Autism And Social Phobia. J Autism Dev Disord. 42:1477-1490; van Steensel FJ, Bögels SM, Perrin S. 2011. Anxiety Disorders In Children And Adolescents With Autistic Spectrum Disorders: A Meta-Analysis. Clin Child Fam Psychol Rev.14:302-17
  - restricted, repetitive, and stereotyped behaviors Hartley SL, Sikora DM. 2009. Sex Differences In Autism Spectrum Disorder: An Examination Of Developmental Functioning, Autistic Symptoms, And Coexisting Behavior Problems In Toddlers. J Autism Dev Disord. 39:1715-1722.

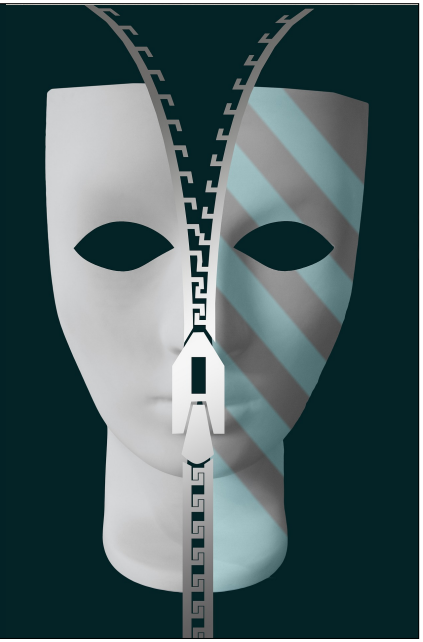
41

SCD		Mood
Results inline with ASD	ADI findings	Results exceed threshold
Results inline with ASD	ADOS	Results exceed threshold
High	Use of stereotyped words or phrases	Low
High	Abnormal use of insight and gestures	Low
High	Reduced empathy	Low
Low	Increased anxiety related symptoms	High

42

Borderline Personality Disorder

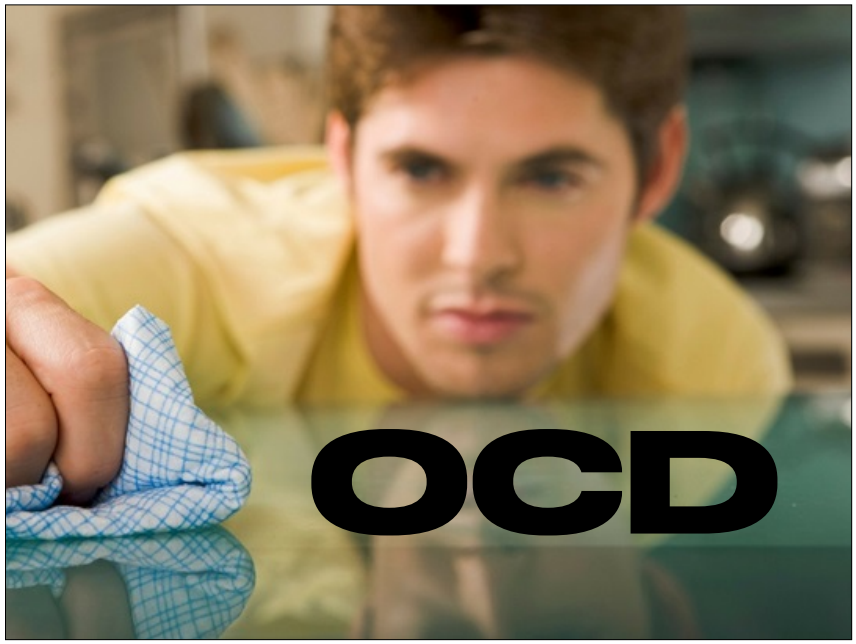
(favors women)



43

SCD		Borderline Personality
Often overwhelmed and labeled as dysregulation.	Emotional Regulation	Emotion regulation: People with BPD exhibit significant mood swings and difficulty regulating their emotions appropriately.
May be seen due to OCD	Impulsivity	Might engage in impulsive behavior, including spending large amounts of money or engaging in substance use.
May be difficult due to interests	Relationships	Challenging
Possibly present	Interests	Absent
Typically not present	Self-Other Differentiation (SOD)	Clinically significant
Negative	Hypermentalization	Positive

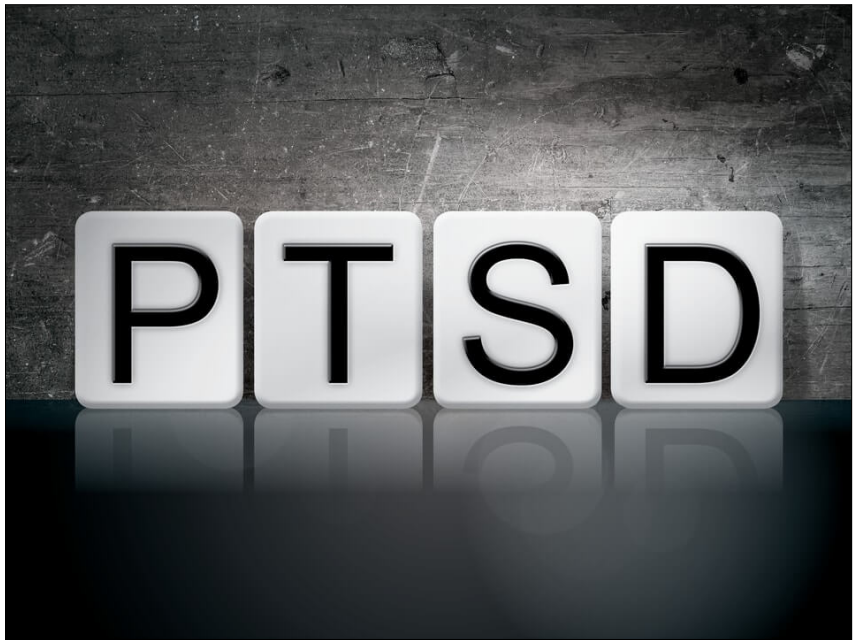
44



45

SCD		OCD
I have something to tell you and it absolutely has to come out now! (often misinterpreted as oppositional behavior)	obsessiveness	intrusive thoughts that are distressing and are difficult to get rid of or ignore, as well as compulsive behaviors used to reduce anxiety
absent	repetitiveness	present
absent	routines and rituals	present

46



47

SCD		PTSD
Present	Avoidant Behavior	Present
Present	Repetitive Play Themes	Present
Deficits in social-emotional reciprocity	Lack of Interest in Peers	Social withdrawal
Deficits in social communication	Failure to share emotions/affect	Reduction of positive emotions
Restricted interests	Play difficulties	Intrusive memories
Possible	Sleep	Recurrent nightmares/difficulty falling or staying asleep

48

Schizophrenia

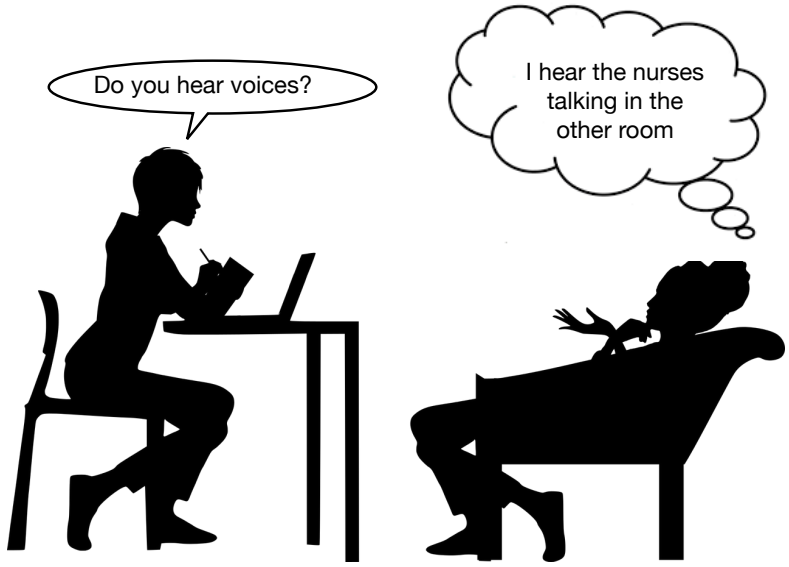
49

- In the 1940s, autism was considered a type of schizophrenia that began in childhood and manifested as difficulty staying in touch with reality.8
- Autism and psychotic disorders have symptom overlap, including difficulty communicating effectively and social detachment or withdrawal.
- Psychosis is often identified using personality tests that ask specific questions about perception and reality
- Positive symptoms in ASD and schitzophrenia may be more disorder-specific.
  - In SZ, positive symptoms largely encompass hallucinations (e.g., hearing voices that no one else hears), delusions (e.g., feelings of grandiosity, or feelings of being controlled by outside forces), bizarre behavior (e.g., talking to oneself, unusual dress and physical appearance), and positive formal thought disorder (e.g., disorganized thinking or incoherent speech) Reichenberg A, Harvey PD, et al. 2009. Neuropsychological Function And Dysfunction In Schizophrenia And Psychotic Affective Disorders. Schizophr Bull. 35:1022–1094; Opler L, Kay S, Lindenmayer J, Fiszbein A. 1999. Structured Clinical Interview: The Positive And Negative Syndrome Scale (SCI-PANSS). North Tonawanda, NY: Multi-Health Systems
- Hyper-literal thinking was not considered by the test creators and as a result, can elevate scales measuring for psychosis.
  - e.g.: a question asking whether you hear things that others do not hear is intended to screen for hallucinations, but an autistic reader might endorse this because they heard someone speaking when other people were not listening.

50

Schitzophrenia or Hyperliteral SCD?

51



52

SCD		Schizophrenia
Core feature	Pragmatic impairment	Core feature
poor	Irony	extremely poor
not typically present	Anhedonia (inability to experience pleasure	typically present
Not significant	Ability to recognize errors in Grice's Maxims	Highly significant
Early childhood	Onset	Young adulthood
No hallucinations	Positive symptom (the presence of) assessment rather than negative (absence)	Hallucinations

53

In summary

- There is extensive comorbidity
- There is extensive overlapping features
- No good diagnostic instruments are presently available
- Diagnostician knowledge is the ultimate key

54

55

56