

Autism & Psychosis

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Tania Kneuer, OTR + Craigan Usher, MD

EASA Center for Excellence

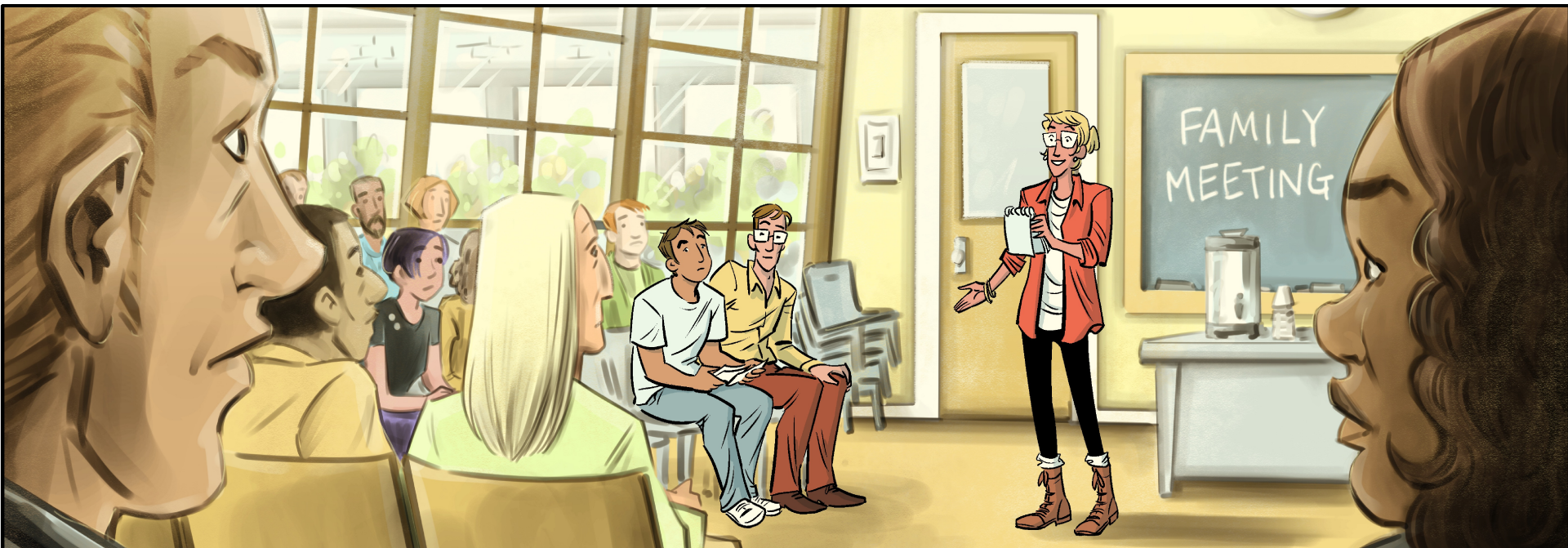
Oregon Health & Science University / Portland State University School of Public Health



SCHOOL OF
PUBLIC HEALTH

Conflicts of Interest

We have no biomedical/financial/ethical conflicts of interest to report.



Learning Objectives

By the end of this session, participants should be able to:

- 1) List the DSM5 criteria for schizophrenia and for autism spectrum disorders
- 2) Embrace how Karl Popper's axiom "science is the art of oversimplifying nature" applies to the ASD/psychosis divide.
- 3) Cite at least one historical example where the term "autism" was considered a hallmark feature of schizophrenia
- 4) Describe how schizophrenia and autism share 3+ clinical and 3+ neurobiological features
- 5) Use a longitudinal interview approach to distinguishing autism and psychosis and autism with psychosis
- 6) Understand an occupational therapy framework for working with youth who are dually diagnosed (autism + psychosis)

DSM5 DEFINITIONS

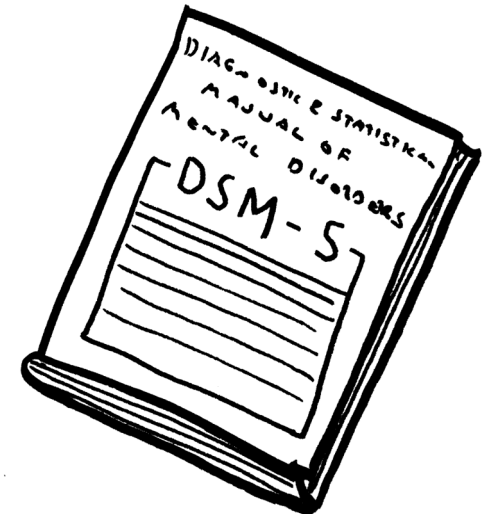
AUTISM & SCHIZOPHRENIA

DSM-5 Definition of Schizophrenia

Symptoms that have an impact on social/academic/occupational functioning for at least 6mos, featuring at least 2 of these symptoms:

- ✓ **D**elusions
- ✓ **H**allucinations
- ✓ Disorganized **S**peech
 - ✓ Disorganized **B**ehavior
 - ✓ **N**egative **S**ymptoms

“**DHS BeNS**”

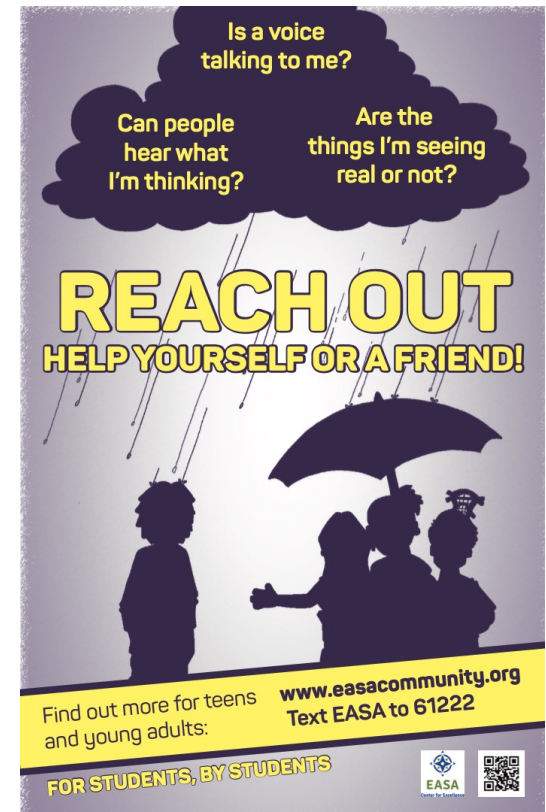


At least one symptom has to be **DHS**

Delusions

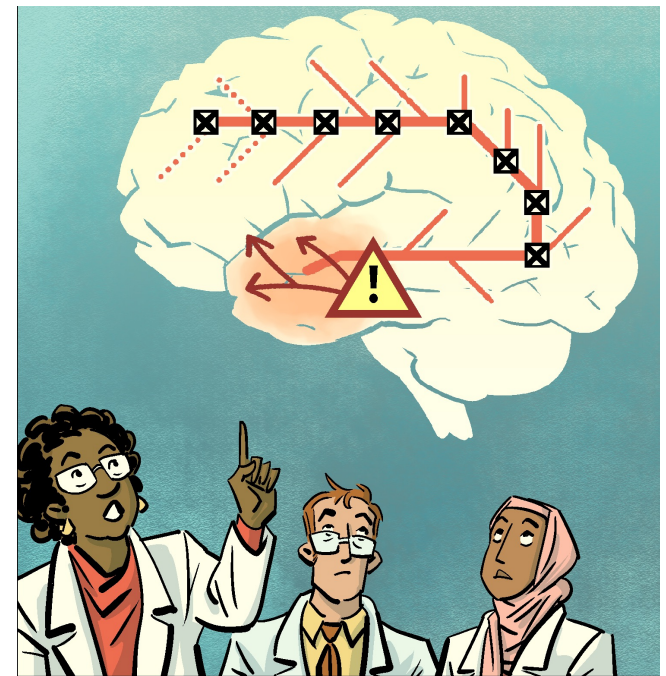
Often persecutory in nature, this might involve an individual believing they are being spied on, followed, cheated on, or poisoned

A grandiose delusion might involve the sense that one is special, a “chosen one” or that they can communicate directly with famous people, or that they can telepathically connect with others



Hallucinations

- **Hallucinations:** “erroneous percepts in the absence of identifiable stimuli”¹ or “a sensory experience in which a person can see, hear, smell, taste, or feel something that is not there.”²
- **Illusion:** a pattern/phenomenon which emerges from an identifiable stimuli, but which morphs into something only the individual senses
- **AVH:** auditory verbal hallucinations are often a voice or voices commenting
- **Nonverbal Auditory Hallucinations:**
 - Buzzing
 - Clicking
 - Drilling
 - Knocking
 - Whooshing



1 Jardri R, Bartels-Velthuis AA, Debbané M, Jenner JA, Kelleher I, Dauvilliers Y, Plazzi G, Demeulemeester M, David CN, Rapoport J, Dobbelaere D. From phenomenology to neurophysiological understanding of hallucinations in children and adolescents. *Schizophrenia bulletin*. 2014 Jun 13;40(Suppl_4):S221-32.

2 Majner K, Hayward M, Fernyhough C, Calkins ME, Debbané M, Jardri R, Kelleher I, Raballo A, Rammou A, Scott JG, Shinn AK. Hallucinations in children and adolescents: an updated review and practical recommendations for clinicians. *Schizophrenia bulletin*. 2019 Feb 1;45(Supplement_1):S5-23.

Hallucinations = ↑ Psychiatric Risk

- 1) Auditory Hallucinations in Youth are Common¹
 - 2) Persistence of Auditory Hallucinations is associated with psychiatric risk²
 - 3) Distress is one of our best indicators of progression to psychosis³
- Both Distressing and Nondistressing AH are linked to trauma and being distracted
 - Vulnerability factors to experiencing distress with AH include:
 - **Negative Self Worth**
 - Bullying, Trauma
 - Low Self-efficacy
 - Less family support



1 Majjer K, Begemann MJH, Palmen S, Leucht S, Sommer IEC. Auditory hallucinations across the lifespan: a systematic review and meta-analysis. Psychol Med . 2017;48:879–888.

2 van Os J, Guloksuz S. A critique of the “ultra-high risk” and “transition” paradigm. World Psychiatry. 2017 Jun;16(2):200-6.

3 Løberg EM, Gjestad R, Posserud MB, Kompus K, Lundervold AJ. Psychosocial characteristics differentiate non-distressing and distressing voices in 10,346 adolescents. European child & adolescent psychiatry. 2019 Feb 28:1-1.

Disorganized Speech

Speech that represents a deviation from baseline and is marked by:

- incoherence
- being illogical
- frequently shift to unrelated topics

Behavioral Dysregulation

Again, represents clear deviation from baseline and may include:

- Change in dress or wearing weather inappropriate attire
- Odd affects (smiling, laughing, crying in an off-topic manner)
- Socially withdrawing (for a previously out-going person)
- Confronting others or making accusations or statements that, to others, seem out-of-the-blue

Negative/Cognitive Symptoms

- Motor activity that is less coordinated or slowed
- Difficulties with social cognition (thinking about what others are thinking and feeling)
- Decreased ability to initiate, sustain, and shift attention
- Difficulties with executive functioning (planning, sequencing, carrying out tasks)

DSM-5 Definition of Autism Part A

Social

Persistent deficits in social communication and social interaction across multiple contexts with deficits in

Social-Emotional Reciprocity

- Abnormal approach
- Inability to engage in back-and-forth
- Reduced sharing of interests, emotions, affect

Nonverbal Communication

- Inflections and mannerisms that don't match affect/topic
- Abnormal/Lack of eye contact
- Lack of facial expressions



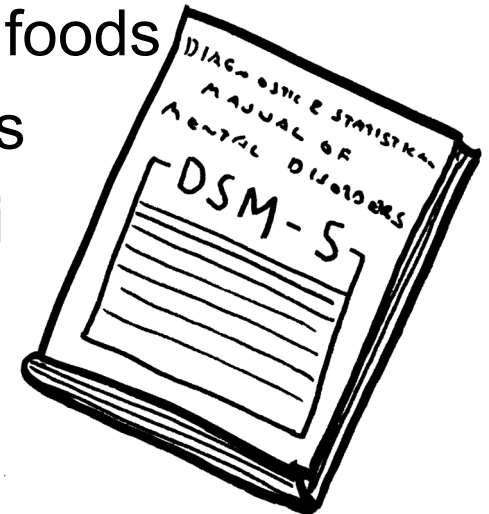
RN

DSM-5 Definition of Autism Part B

Restricted, Repetitive Patterns of Behavior, Interests or Activity

Again, in multiple context, person is observed to have challenges with:

- Stereotypies-flapping, clapping, spinning, echolalia, lining things up
- Insistence on sameness-routines, rituals, foods
- Restricted, fixated interests-objects, topics
- Hyper or Hyporeactivity to sensory stimuli
 - Textures (tags on shirts)
 - Sounds (misophonia)
 - Indifference to pain



SIRS

“RN SIRS”

- Social Communication Difficulties

- Reciprocity Challenges
- Nonverbal Communication Disruption

- Restricted, Repetitive Patterns of Behavior

- Stereotypies
- Insistent, Inflexible Adherence to Schedule/Sameness
- Restricted Interests
- Sensory Issues



Recording an ASD

- 3 levels outlined in DSM5
- Example:

Autism Spectrum Disorder (ASD), Level 1 featuring monotone speech, poor eye contact, occasional hand wringing; has IEP at school for speech offering pragmatic language support, has great social interest, many friends (“who just know I’m quirky”), academically doing well

Three Functional Levels of Autism

written from an autistic perspective



Level 1	Level 2	Level 3
Requiring Support <i>I need help navigating a non-autistic world.</i>	Requiring Substantial Support <i>I need help handling everyday challenges.</i>	Requiring Very Substantial Support <i>I often need one-on-one support.</i>
Average traits People may see me as awkward, not disabled. I can befriend or date non-disabled people, but it's hard and I'm often lonely. I can handle change, but I prefer routine. My fidgeting is seen as quirky or “annoying.” People may think my developmental delays are signs of laziness or insecurity.	Average traits People can usually tell that I have a disability. My social life is very limited or nonexistent. Coping with change is very challenging. My repetitive behaviors are noticeably unusual. I have significant developmental delays and will meet milestones late.	Average traits My disability is very obvious. I usually only communicate to express needs or answer questions. Change and transitions can be unbearably difficult. My intense repetitive behavior is calming and important to me. I have large developmental delays and may not meet every milestone.
Please know that Social interactions are challenging. Please be understanding and offer help. I struggle more than I let on. Meeting others' expectations is exhausting. Please be patient. I deserve respect and support.	Please know that I may seem inattentive, but I hear and understand you. Routines and repetitive behavior help me feel safe. I need a lot of help coping with stress. I deserve respect and support.	Please know that I may seem unresponsive, but I hear and understand you. Routines and repetitive behaviors help me feel safe. I need help with communication skills. I deserve respect and support.

These levels aren't clear-cut or permanent. Someone's skills may change. Stress, environment, and support will impact someone's ability to function.

HISTORICAL OVERLAP

Diagnostic Nosology: Autism & Schizophrenia

Eugen Bleuler (1857-1939)



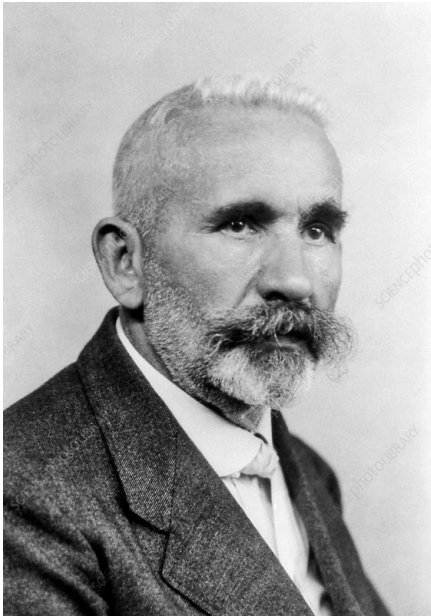
- Inspired by his sister's treatment at Burghölzli Asylum in Zurich, Switzerland he wished for a humanistic **and** biological approach to mental illness
- He studied psychoanalysis (but wrote to Freud that "all or nothing is in my opinion necessary for religious communities and useful for political parties...but for science I consider it harmful") and considered biology
- He was also quite critical of the grim prognosis associated with "dementia praecox" at the time
- Characterized "positive" and "negative" symptoms and outlined 4As...

Bleuler's 4A's

- **Association** loosening of connections from one idea to the next
- **Affect:** affective blunting, diminished reactivity
- **Ambivalence:** filled conflicting emotions and ideas, difficulty organizing and utilizing executive function to determine a course of action
- **Autism:** “self-absorption” / “withdrawal from reality” / preoccupation with inner life to the exclusion of external engagement

Etymology of Autism: Greek “auto” or self

Emil Kraepelin (1856 – 1926)



- Dementia Praecox
- “we are dealing with children who have always shown a quiet, shy, withdrawn nature, engaged in no friendships and only lived for themselves.”
- Until the 1970’s, little distinction between “autism” and schizophrenia

Etymology of Dementia Praecox:
Latin “de-ment” halt/reduce thinking +
Latin praecox “very early”

SHARED NEUROBIOLOGY

Autism & Schizophrenia

Shared Biology

1. Family history of schizophrenia increases risk of ASD

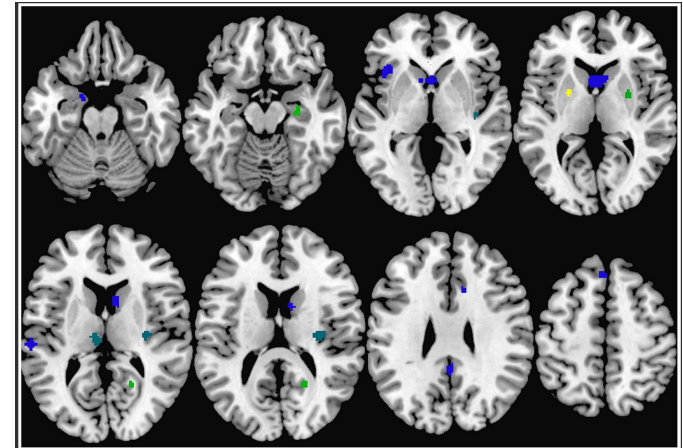
- Parents with schizophrenia: Odds ratio 2.9
- Sibling with schizophrenia: Odds ratio 2.6

2. Lower Cortical Grey Matter Volumes in Both Conditions

3. Individuals with ASD are at increased risk for SSD (7-34%)

4. Neurological Soft Signs in both

5. Difficulties in social cognition in both



¹Sullivan PF, Magnusson C, Reichenberg A, et al. Family history of schizophrenia and bipolar disorder as risk factors for autism. *Arch Gen Psychiatry*. 2012;69(11):1099-1103

²Cheung C, Yu K, Fung G, et al. Autistic disorders and schizophrenia: related or remote? An anatomical likelihood estimation. *PLoS One*. 2010;5(8):e12233.

³Oliver LD, Moxon-Emre I, Lai MC, Grennan L, Voineskos AN, Ameis SH. Social Cognitive Performance in Schizophrenia Spectrum Disorders Compared With Autism Spectrum Disorder: A Systematic Review, Meta-analysis, and Meta-regression. *JAMA Psychiatry*. 2021;78(3):281-292.

Components of Social Cognition

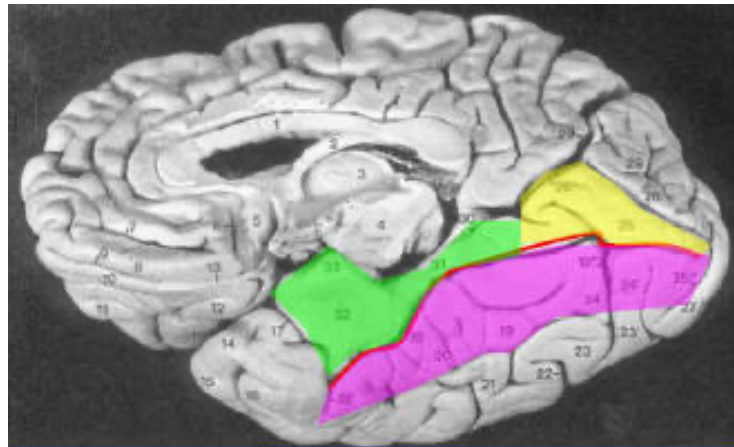
- ✱ Three Neural Systems of Social Cognition:
 - ✱ Social-Detection (AWARENESS)
 - ✱ Salience Making (MEANING)
 - ✱ Cognitive Regulation (REASONING)



- Adolphs R. Cognitive neuroscience of human social behavior. *Nat Rev Neurosci* 2003 4:165-178
- *Fonagy P. The Mentalization Based Focus Approach to Social Development in *Handbook of Mentalization*, ed J.G. Allen & P. Fonagy. New York: Wiley
- Mehl S, Hesse K, Schmidt AC, et al. Theory of mind, emotion recognition, delusions and the quality of the therapeutic relationship in patients with psychosis - a secondary analysis of a randomized-controlled therapy trial. *BMC Psychiatry*. 2020;20(1):59.
- Smith MJ, Schroeder MP, Abram SV, et al. Alterations in brain activation during cognitive empathy are related to social functioning in schizophrenia. *Schizophr Bull*. 2015;41(1):211-222.

1-Awareness

- *Fusiform Gyrus (pink)
- *Superior Temporal Sulcus (red line)
- *Anterior Temporal Cortex



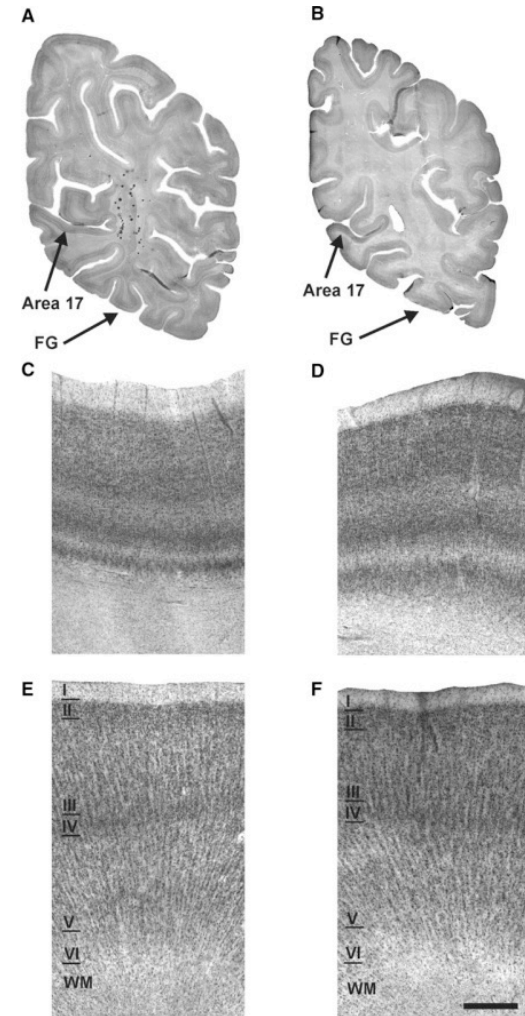
Digimon and Altered Social Awareness

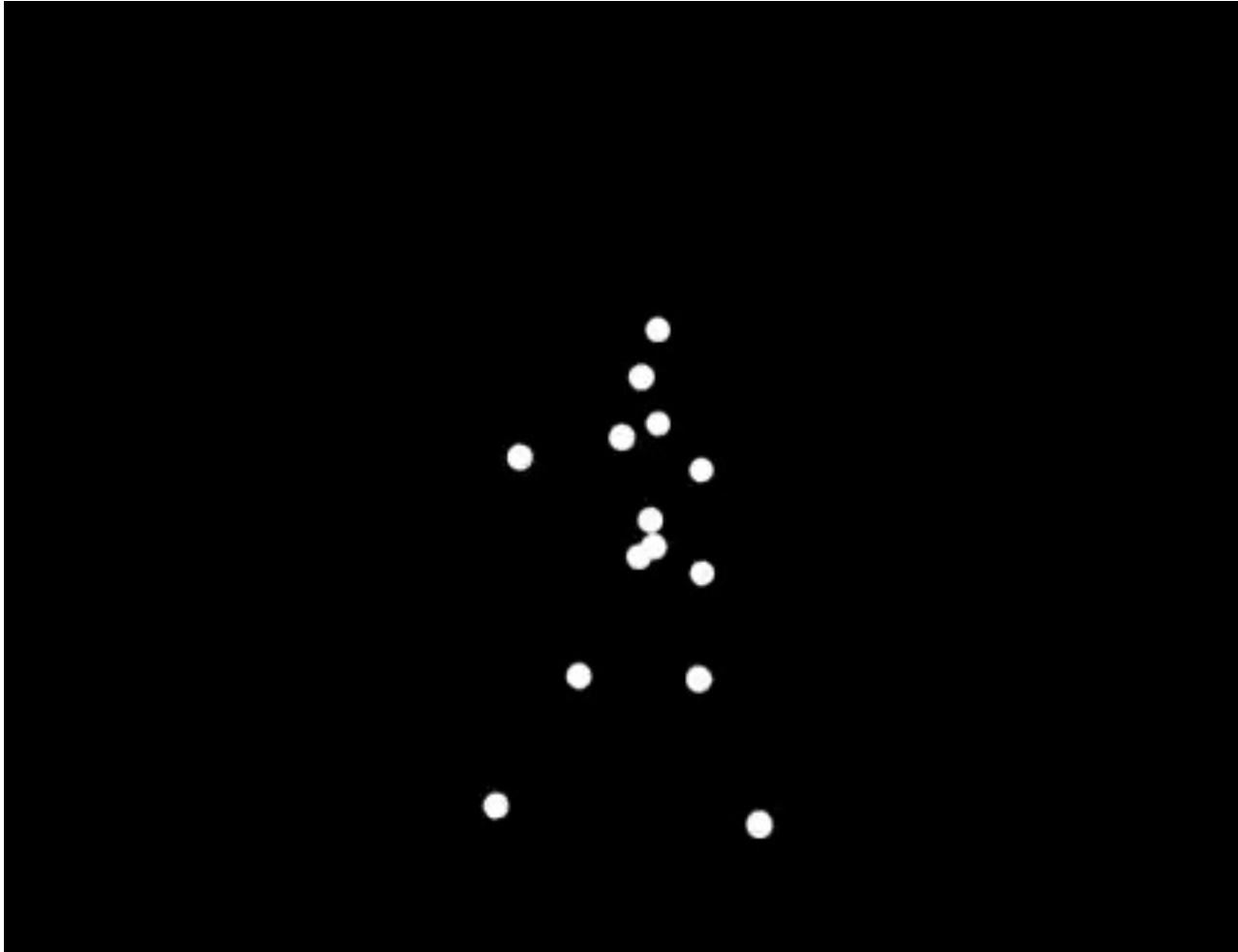


Grelotti DJ, Klin AJ, Gauthier I (2005) fMRI activation of the fusiform gyrus and amygdala to cartoon characters but not to faces in a boy with autism. *Neuropsychologia* 43(3):373-85.

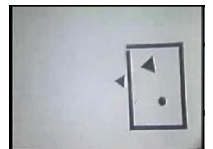
Representative
photomicrographs of 200
micrometer thick coronal section
of the brain hemispheres from a
control patient (A,C,E) and a
patient with autism, showing
either the entire hemisphere
(A,B) or area 17 (C,D) and the
fusiform gyrus (FG) (E,F)

van Kooten IA, Palmen SJ, von Cappeln, et al. Neurons in the fusiform gyrus are fewer and smaller in autism. *Brain* 2008 Mar 10–epub

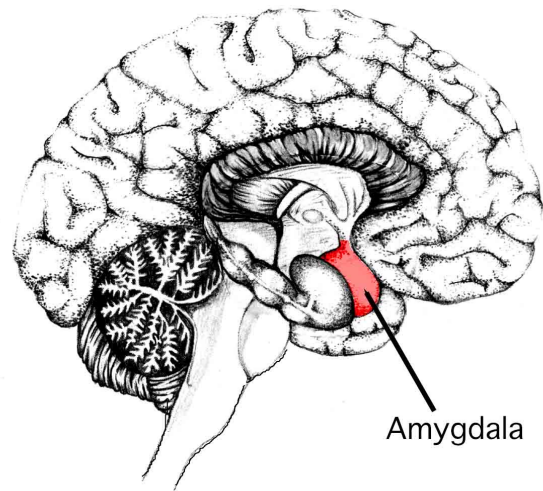




You might also check out the [Heider-Simmel video](#) (1944)



2-Meaning/Salience Making

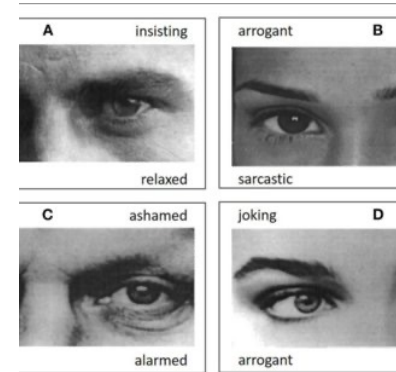


- Amygdala--anxiety / emotional learning
- Hypothalamus--warmth/love
- Nucleus Accumbens--reward

*Fonagy P. The Mentalization Based Focus Approach to Social Development in *Handbook of Mentalization*, ed J.G. Allen & P. Fonagy. New York: Wiley

Reading Others

- Tests like Adolph's faces or Baron-Cohen's Reading the Mind in the Eyes offering ways of quantifying social cognition and “shared emotional reality”
- To be clear: this doesn't mean one is “right” but that one shares a commonly held stance about what another's emotion entails



What is this person's emotion?



Kim SW, Moon SY, Hwang WJ, et al. Impaired Performance on the Reading the Mind in the Eyes Test in First-Episode Psychosis and Clinical High Risk for Psychosis [published online ahead of print, 2020 Dec 11]. *Psychiatry Investig.* 2020;10.30773/pi.2020.0264.

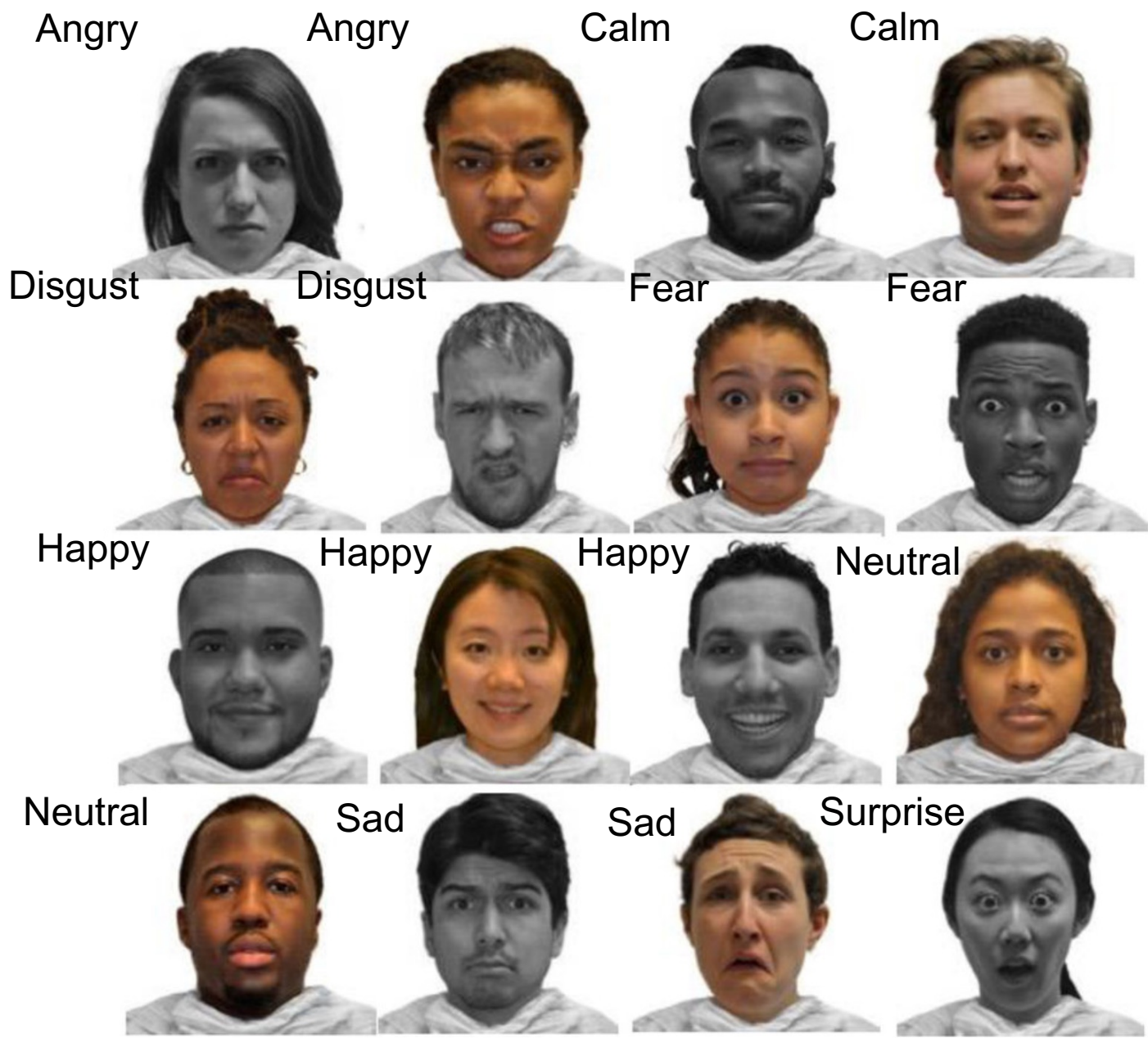
Happy Sad Angry Neutral Frightened Surprised Disgusted

REPEAT

Number 1

NEXT

Paul Ekman Faces



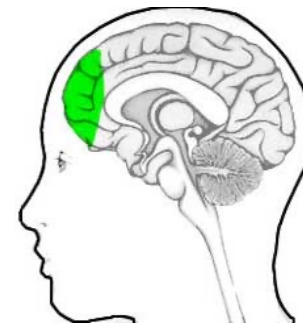
3-Cognitive Regulation / Reasoning

● Functions:

- Inhibiting pre-potent responses (effortful control)
- Mediating goal-directed behavior
- Mentalizing (Perspective-taking / Theory of Mind Tasks)

● Structures:

- Dorsomedial Pre-Frontal Cortex
- Ventral Pre-Frontal Cortex
- Anterior Cingulate Gyrus

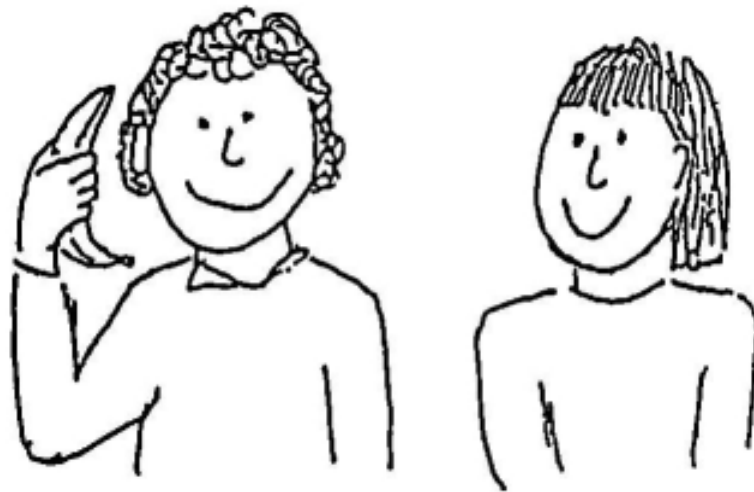


First Order Theory of Mind: The False Belief Test



Second-order Theory of Mind

“Strange Stories”



“Look, this banana is a phone!”

SHARED CLINICAL FEATURES

Autism & Schizophrenia

Psychosis

Hallucinations
Delusional Ideas

Mild Perceptual
Abnormalities
Atypical Behavior
Motor
Disturbances
Sensory
Overwhelm
Communication
Difficulties
Bizarre Thinking
Social
Impairment

Autism

Nonverbal
Communication Deficits
Repetitive Behaviors

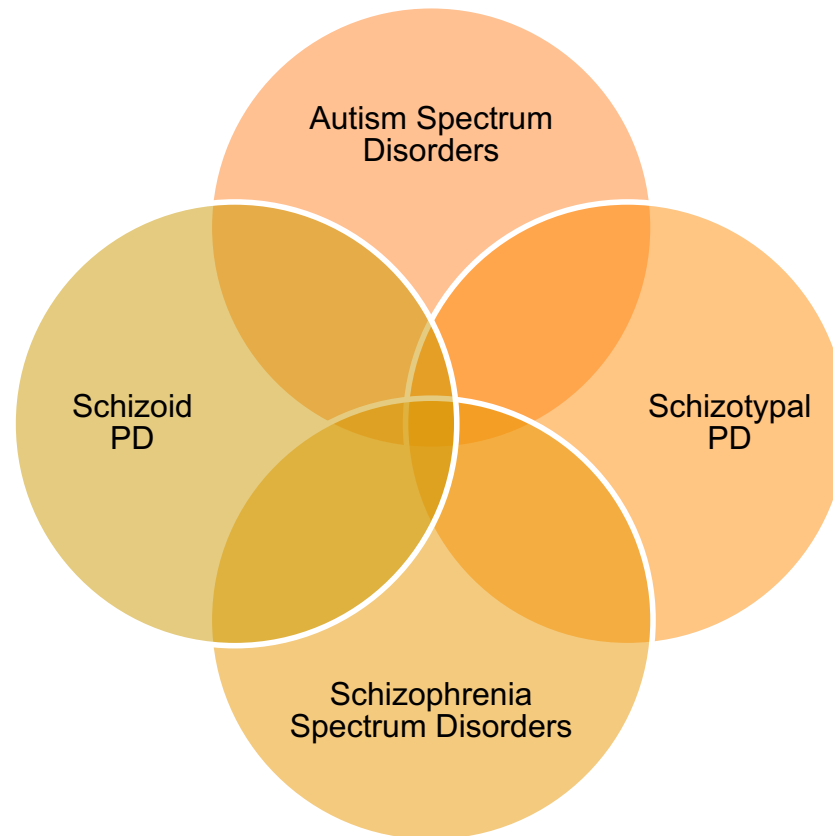
Similar Features

Table 1
Overlap between core autism features and psychosis

	Autism	Psychosis
Social-Emotional Challenges	<ul style="list-style-type: none"> • Lack of social-emotional reciprocity • Misreading social queues • Restricted or flattened affect 	<ul style="list-style-type: none"> • Social withdrawal • Blunted affect • Paranoia • Low mood • Alexithymia
Communication Challenges	<ul style="list-style-type: none"> • Language delay • Echolalia 	<ul style="list-style-type: none"> • Poverty of speech • Unusual or bizarre speech
Unusual Thought Content	<ul style="list-style-type: none"> • Restricted interests • Perseveration • Concrete thinking • Problems with perceptual processing 	<ul style="list-style-type: none"> • Perseveration • Delusions • Disorganization • Hallucinations
Behavioral Features	<ul style="list-style-type: none"> • Repetitive movements 	<ul style="list-style-type: none"> • Posturing and stereotypies during catatonia

This table is from Chandrasekhar T, Copeland JN, Spanos M, Sikich L. Autism, Psychosis, or Both? Unraveling Complex Patient Presentations. *Child Adolesc Psychiatr Clin N Am.* 2020;29(1):103-113

There may be even further overlap with these pervasive patterns of relating to self and others...



- Neither desires nor enjoys close relationships, including being part of the family.
- Almost always chooses solitary activities.
- Has little, if any, interest in having sexual experiences with another person.
- Takes pleasure in few, if any, activities.
- Lacks close friends or confidants other than first-degree relatives.
- Appears indifferent to the praise or criticism of others.
- Shows emotional coldness, detachment, or flattened affect.

- Ideas of reference.
- Odd beliefs or magical thinking (telepathy, superstitions, fantasies)
- Unusual perceptual experiences, including bodily illusions.
- Odd thinking and speech.
- Suspiciousness and paranoid ideation.
- Inappropriate or constricted affect.
- Odd, eccentric, peculiar behavior.
- Lack of close friends or confidants outside first-degree relatives.
- Excessive social anxiety.

Schizoid Personality Disorder

- A pervasive pattern of detachment from social relationships and restricted range of expression of emotions in interpersonal settings with at least four of the following:
 1. Neither desires nor enjoys close relationships, including being part of the family.
 2. Almost always chooses solitary activities.
 3. Has little, if any, interest in having sexual experiences with another person.
 4. Takes pleasure in few, if any, activities.
 5. Lacks close friends or confidants other than first-degree relatives.
 6. Appears indifferent to the praise or criticism of others.
 7. Shows emotional coldness, detachment, or flattened affect.

Cluster A: Schizoid Personality Disorder

- *The Remains of the Day* (1993)



<https://www.youtube.com/watch?v=G2un8xvArsU>

Cluster A: Schizotypal Personality Disorder

A pervasive pattern of social and interpersonal deficits marked by acute discomfort with and reduced capacity for close relationships as well as cognitive or perceptual distortions and eccentricities with five or more of the following:

1. Ideas of reference.
2. Odd beliefs or magical thinking (telepathy, superstitions, fantasies)
3. Unusual perceptual experiences, including bodily illusions.
4. Odd thinking and speech.
5. Suspiciousness and paranoid ideation.
6. Inappropriate or constricted affect.
7. Odd, eccentric, peculiar behavior.
8. Lack of close friends or confidants outside first-degree relatives.
9. Excessive social anxiety.



On Nomenclature

The term personality disorder is problematic. It hints not that someone is in psychological pain or having difficulty that is treatable, but can feel tantamount to saying that one is the wrong kind of person. Even Adolph Stern, who coined the term “borderline” wrote not of *person*-ality disordered individuals, but instead of individuals in tremendous psychological pain he referred to as “the borderline group”^{*} (people who’s functioning sometimes was in the everyday neurotic realm and who could also slip into operating in a psychotic fashion—that is, out of touch with shared reality). We might better call these intrapsychic and interpersonal functioning disruptions; regardless of what we call these disorders, we do well not to throw around diagnoses as derision, but as names for phenomena that might give people reassurance (others are going through this) and hope (and others have made it through, there are ways of addressing this). So, it is for the sake of convenience, but not without hesitation, that we use the DSM-5 term personality disorder.

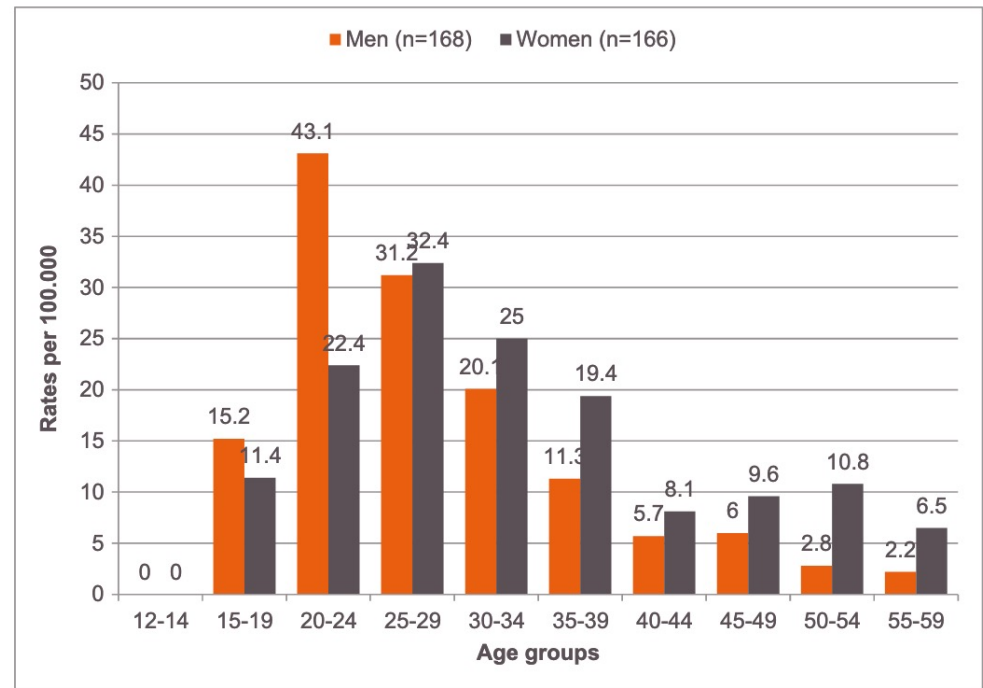
^{*}Stern A. Psychoanalytic therapy in the borderline neuroses. *The Psychoanalytic Quarterly*. 1945;14(2):190-8.

DIFFERENCES & ASSESSMENT TOOLS

Autism Spectrum Disorders

Age of First Schizophrenia Spectrum Disorder Diagnosis

- Most men develop schizophrenia at age 15-25, young women 20-30
- Approximately 12.5 – 33% of people develop symptoms before age 18
- The male to female ratio is 1.4:1.
- Childhood-onset schizophrenia (COS) is defined as onset 13 and younger and is extremely rare (1:100,000)
- Internationally, the prevalence of schizophrenia is 1-2%



From: Riecher-Rössler A, Butler S, Kulkarni J. Sex and gender differences in schizophrenic psychoses-a critical review. *Arch Womens Ment Health*. 2018;21(6):627-648

Autism

- Prevalence: 1.5% in developed countries
- Avg of Age of Diagnosis in Youth <10: 3 ½ yo
- Male to Female ratio is 3:1
- Why do people get diagnosed later?
 - High Functioning Autism (HFA)
 - Masked Symptoms (lack of external, overt symptoms)
 - Different Diagnostic Paradigms: ADHD, Social Phobia
OCD
 - Socioeconomic Status / Ethnicity
 - Sex/Gender Differences

van 't Hof M, Tisseur C, van Berckeleer-Onnes I, et al. Age at autism spectrum disorder diagnosis: A systematic review and meta-analysis from 2012 to 2019. *Autism*. 2021;25(4):862-873.

Loomes R, Hull L, Mandy WPL. What Is the Male-to-Female Ratio in Autism Spectrum Disorder? A Systematic Review and Meta-Analysis. *J Am Acad Child Adolesc Psychiatry*. 2017;56(6):466-474.

Early Autism Presentations

- Sent by his school for an evaluation of extreme tantrums, grunted responses with poor articulation, and “weird habit of snapping” a 5 year-old boy in your waiting room lines up cars, knocks them over, claps and repeats with no eye contact to his mom who is watching adoringly.
- A 4 year-old girl says “hello” while staring at the ground; she then returns to a shape/block toy in the waiting area repeatedly putting in shapes and emptying. Next she races to the elevator and presses the button time and again; all the while, she glances down at her sweater and sucks on pills she notices.





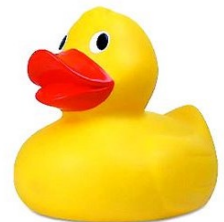
Gold Standard Assessments

Autism Diagnostic Observation Schedule (ADOS)

- Four modules to account for varying levels of language development
- Lower modules (>playing), Higher modules (>talking)
- Cut-offs for social behavior and communication (examining joint attention, eye contact, social rapport, echolalic speech)

Autism Diagnostic Interview (ADI-R)

- Standardized, semi-structured, investigator-based interview for caretakers of individuals with suspected autism
- Both ADOS/ADI-R require training and best completed by individuals who regularly complete comprehensive assessments which keep in mind context including intellectual strengths and challenges



Two Tools to Help Diagnose Autism

Social Reciprocity Scale (SRS)

- 63 item screening tool that gives people scores versus the population
- Age 29mos – 18yo
- Includes 5 subscales:
 - Social Awareness
 - Social Cognition
 - Social Communication
 - Social Motivation
 - Restricted Interests and Repetitive Behavior

Social Communication Questionnaire (SCQ)

- Age 4 – 40yo
- Draws from Autism Diagnostic Interview (ADI)
- Looks back at strengths and difficulties during development.
- Helps clinicians have a structured way to look back and distinguish which features were present before the onset current presenting symptoms

Developmental Interview Timeline

- Take a really good timeline
- Early feeding and sleeping
- Motor Functioning from birth – present
- Sensory Integration/Experience from birth – present
- Toilet training – bowel and bladder continence
- Social Functioning from birth – present
 - Social Interest
 - Capacity for sustaining conversations/interactions
 - Capacity for team activities/collaboration
 - Capacity for sustaining friendships
 - Capacity for tolerating groups of different sizes
- Beliefs (magical, grounded) early life – present
- Academic Functioning (teacher reports) preschool - present
- Videos (Toddler, Preschool, School Age, Middle School, High School)

Developmental Timeline

Ask about...

- Motor: strength and coordination
- Sensory: hypo/hyper
- Social: interest/skills
- Academic: teacher/parent
- Worldview: magical/grounded

Learn where present
“symptoms” or difficulties
for which the
individual/family are
seeking help arose.



Infant /
Toddler

Preschool

School
Age

Middle
School /
Tween

HS/Teens

Emerging
Adulthood

ASD: “Negative
Symptoms”



Recovery Oriented Coordinated Specialty Care

- **Psychoeducation**
 - You are not alone. This has happened to others! It gets better, usually a lot, and recovery is possible
- **Individual Therapy (such as CBTp)**
 - Symptoms are neurological deceptions; we can acknowledge voices or disruptions and find ways to work with/around them
- **Functional / Patient-Guided Collaborative Teamwork**
 - What are your goals? How can we achieve them?
- **Family Therapy/Guidance**
 - Let's solve problems together
- **Housing / Food Assistance**
 - Safe place to live
- **Employment Support**
 - What kind of work would you like to do/do you do? How can help you make this work better/easier/more fulfilling?
- **Academic Support**
 - 504 plans / IEP / safe place and people to turn to for support
- **Safety Planning**
 - Suicide is a major risk in psychosis; what strategies can we use to help in case of crisis?
- **Medication Consideration**
 - Shared Decision Making, Stabilization and Functional Recovery Focused, Taper Strategies kept in mind

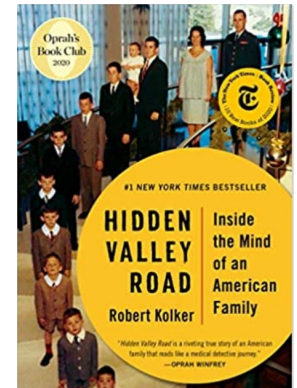
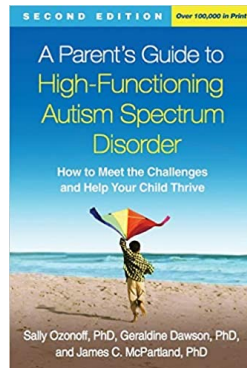
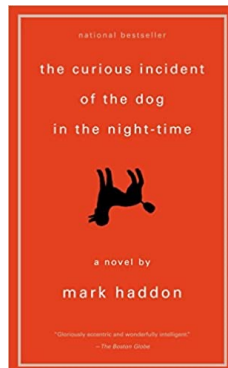
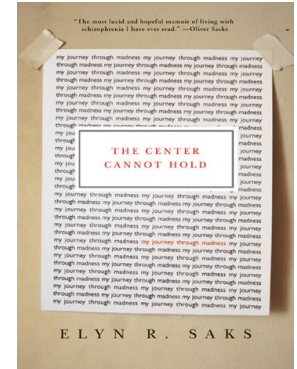
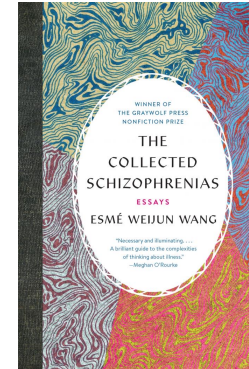
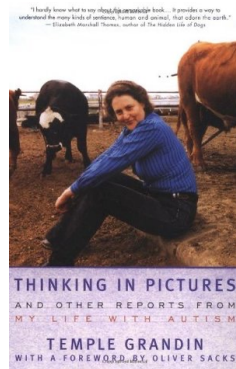
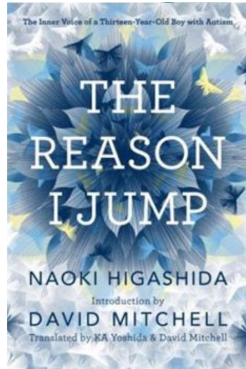
A Call to Breakdown Silos



You may...

- Discover psychosis in individuals with ASD
- Diagnose ASD but not psychosis
- Learn about subthreshold ASD (signs/symptoms) in individuals with psychosis
- Find subthreshold psychosis signs/symptoms in individuals with ASD

For More Reading...



Learning Objectives Revisited

So today you learned:

1) The DSM5 criteria schizophrenia and for autism spectrum disorders:

- Schizophrenia:
 - **D**elusions, **H**allucinations, **S**peech Disruption, **B**ehavior Disturbance, **N**egative Symptoms
- Autism:
 - **R**eciprocity in Social Emotional Exchanges can be abnormal
 - **N**onverbal Communication Deficits
 - **S**tereotypies
 - **I**nsistence on Sameness
 - **R**estricted, fixated interests sometime on items and parts
 - **S**ensory Disruption (hyper/hyposensivities)

So we learned so far...

2) There are historical, clinical feature, and neurobiological overlaps between autism and schizophrenia and people can meet criteria for both; bringing to mind that psychiatric science may have oversimplified nature.

3) In 1913 Eugen Bleuler characterized schizophrenia as entailing “autism”

4) Clinical feature Overlap and Neurobiological Overlap

- Atypical Behavior, Motor Disturbances, Sensory Overwhelm, Communication Difficulties, Bizarre Thinking, Social Impairment
- Shared Genes/Hereditry, ↓ cortical grey matter, ↑ risk of psychosis with ASD, neurological soft signs, social cognition disruption

5) We can use a longitudinal approach to discover age of onset of various symptoms. Someone with “negative symptoms” since infancy/toddlerhood who then develops “positive symptoms” in their teens would likely have ASD + psychosis. For someone whom you suspect has an ASD, sending them to experts trained in the ADOS and ADI-R may be helpful; you can also use the SCQ

Brian Case Study

Brian is a young man aged 18 years old who has been in a FEP program for 6 months with diagnoses of autism, schizophrenia, and generalized anxiety disorder. Brian has specific interests in art, computer graphics/programming, chess, and his work at a consignment store.

- ST/PT/OT during his youth with the creation of an IEP at age 9
- Family history of both autism and schizophrenia
- Bullying during middle school resulting in increased isolation
- Difficulty with executive functioning to include: most specifically sustained attention especially when not in a controlled environment, decreased problem solving, poor historian in relation to time
- Language and processing challenges include: repeating certain messages, perseverative talk with self and others, over-eagerness in agreeability in his responses often saying yes
- Sensory sensitivity includes odor and certain sounds
- Repetitive behaviors include organizing certain objects at work repeatedly to “get it right” and flapping hands at very high levels of stress

Questions

What are some sensory challenges Brian might have at school with hypersensitivity to sound and smell?

Where is an example of an accommodation for sustained attention and problem solving at school?

Brian's School Sensory Challenges

School challenges Brian with loud noises such as the bell ringing between classes, crowded hallways, adapting to different classrooms, and certain odors for example gym class and the lunchroom.

His IEP for school allows for him to transition between classes prior to the bell ringing, he has concert level earplugs he wears in the hallway. He sits in the same seat in every class to aide in his comfort level in the classroom. He has a therapeutic essential oil he has chosen to aide in offsetting the smells at school. He has a quiet small room for test taking and has an open offer to use this space as needed during the day when his anxiety elevates for calming.

Question

What details can you pick out that might suggest Brian, who was diagnosed with autism at a young age, is developing psychosis?

- His challenges with language become stronger when he is experiencing a higher level of anxiety. Communication has become more difficult in the last year and feels a particular group of students that often wear black, are analyzing him and something bad is going to happen.
- Brian is having increased difficulty connecting with peers and co-workers. He has started walking away when someone speaks with him, fearing he will say something unusual. Despite feeling unconnected, he is sensitive to the emotions of others around him noticeably feeling sad when someone is sad or hurt or quick to laugh when someone is happy

Brian's/His Family's: Needs and Concerns

- Brian's main present concern is he wants his consignment store job to be a success. He has been struggling lately and has had to go home early a couple days. He is very particular about what time the daily supply truck arrives as a slight change in the schedule is very distressing to him, since they will ask him to do something else when the truck isn't there and he likes his regular routine.
- Staff recognize changes in his behavior such as repetitive statements he makes about the truck, organizing and reorganizing the glassware by size and color, and pacing.
- Brian also wants to feel more comfortable at school and make a few new friends
- His family wants to support Brian in both school and work to help him feel less anxious overall and safe in these environments.

What might be an area you would prioritize for his goals?

Brian and Family: Goals

Brian: “I want to make new friends in my classes”

- Goal: Brian will develop and utilize a reference book for communicating at school and work, targeting expressions for opening and maintaining a conversation.

Brian: “ I don’t want to feel so worried about the truck at work all the time”

- Brian to engage in an unfamiliar task when asked at work utilizing his preferred calming strategy of deep breathing and pressing his palms together prior to initiating the task with a reward of a short break of 5 minutes playing computer chess.

Parents: “I want to help him but he gets so irritable these days it’s hard”

- Work with family around psychoeducation for routine prior to and following school/work, implementing family guidelines to promote positive interactions and Brian’s independence

General Assessment Suggestions

- Obtain records ahead of time i.e. developmental, IEP etc.
- Integrative comprehensive assessment of past history, present concerns incorporating bio-psycho-social framework
- Interview and observation with the participant, family members, supports and/or care providers
- Identify strengths
- Assess for changes in the last year in function, sensory, cognition, mood and thoughts
- Look for signs of distress during the assessment process and modify as needed

General Treatment Suggestions

- Utilize reflective listening to support problem solving
- Consider changing frequency and length of therapy
 - Take extra time..break the goals down into smaller steps
- Support and integrate accommodations
- Offer a more structured approach use straightforward language
- Stay flexible, try something new
 - i.e. use art, music, movement with the participant
- Use visual supports for learning
- Adaptive language support as needed
- Evaluate outcomes collaboratively

OT Summary

- Therapy for our youth with autism spectrum disorders in FEP programming is not much different overall. The principles are the same.
- Modify your approach as needed and consider the significant benefits in helping youth reach their goals with creativity, flexibility, and informed collaboration.