

Obsessive-Compulsive Disorder

Outline of OCD Lecture

- Day 1
 - What is OCD?
 - What causes OCD?
 - How do you treat it effectively?
- Day 2
 - What does typical course of CBT look like?
 - What specific skills will you use?

What is Obsessive-Compulsive Disorder?

A Brief History

- Reports of O/C symptoms and case studies date throughout recorded history
 - Michelangelo, Martin Luther, Beethoven, Nikola Tesla, Howard Hughes, and others
- DSM conceptualization is the most influential at this time
 - Major changes from 4th to 5th edition

DSM-5 Operational Definition

A. Presence of obsessions, compulsions, or both:

- Obsessions as defined by (1) and (2):
 1. Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted and that in most individuals cause marked anxiety or distress
 2. The person attempts to ignore or suppress such thoughts, urges, or images, or to neutralize them with some other thought or action (i.e., by performing a compulsion)

DSM-5 Operational Definition

- Compulsions as defined by (1) and (2):
 1. Repetitive behaviors or mental acts that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
 2. The behaviors or mental acts are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive

Operational Definition

- B. The O/C are time consuming (for example, take more than 1 hour a day) or cause clinically significant distress or impairment in functioning.
- C. The O/C symptoms are not due to the direct physiological effects of a substance or a GMC
- D. The content of the obsessions or compulsions is not restricted to the symptoms of another mental disorder

OCD Specifiers

- *Good or fair insight*: Recognizes that OCD beliefs are definitely or probably not true, or that they may or may not be true
- *Poor insight*: Thinks OCD beliefs are probably true
- *Absent insight/delusional beliefs*: Completely convinced OCD beliefs are true
- *Tic-related OCD*: The individual has a lifetime history of a chronic tic disorder

Most Common Obsessions

Type of Obsession	Examples
Contamination	Bodily fluids, disease, germs, dirt, chemicals, environmental contaminants
Religious Obsessions	Blasphemy or offending God, high concern about morality and what is right and wrong.
Superstitious ideas	Lucky numbers, colors, words
Perfectionism	Evenness and exactness, "needing" to know or remember, fear of forgetting or losing something
Harm	Fear of hurting others through carelessness, fear of being responsible for something terrible happening
Losing Control	Fear of acting on an impulse to harm self or others, fear or unpleasant mental images, fear of saying offending things to others
Unwanted Sexual Thoughts	Forbidden or "perverse" sexual thoughts, images, or impulses; obsessive thoughts about homosexuality; obsessions involving children or incest; obsessions about aggressive sexual behavior

Common Compulsions

Type of Compulsion	Examples
Checking	Making sure that you did not (or will not) harm yourself or others, or that you did not make a mistake, or that nothing "terrible" happened
Repeating	Repeating things in multiples or a certain number of times, certain body movements, rereading or rewriting
Washing / Cleaning	Washing hands excessively, excessive showering or bathing, cleaning outside the norm
Mental compulsions	Cancelling out bad thoughts with good ones, counting while walking or performing some task, prayer to prevent something terrible from happening
Hoarding	Collecting items due to compulsions
Ordering and Arranging	Putting things in "proper" order or until it "feels right"

OCD Subtypes

- Tic-related OCD
 - May account for up to 40% of pediatric cases
 - Often male-dominated
 - High incidence of symmetry/exactness/ordering
 - Lower cleaning/contamination
 - High rates of trichotillomania and DBDs

Leckman et al. (2010)

OCD Subtypes

- Early-onset OCD
 - Pre-pubertal onset of OC symptoms
 - Similar nature of OC symptoms
 - Dominated by males
 - Substantial portion will remit by adulthood
 - Increased risk of tics and trich
 - Confounded/overlapping with tic-related OCD

Leckman et al. (2010)

OCD Symptom Dimensions

- Some disagreement over how many dimensions are present
- Factor analytic and latent class analysis models have come up with different dimensions
- Dimensions appear to be temporally stable

Abramowitz et al. (2009); Leckman et al. (2010)

4-factor

- Hoarding
- Contamination/cleaning
- Symmetry/ordering
- Forbidden thoughts

5-factor

- Hoarding
- Contamination/cleaning
- Symmetry/ordering
- Forbidden thoughts
- Over-responsibility

LCA

- Single spectrum based on severity or number of endorsed symptoms

% of OCD Cases Reporting each Symptom

Checking	79.3
Hoarding	62.3
Ordering	57.0
Moral	43.0
Sexual/religious	30.2
Contamination	25.7
Harming	24.2
Illness	14.3
Other	19.0

OCD Prevalence

- Around 1% in pediatric population
- Between 2-3% in the adult population
 - Large number of “sub-clinical” cases (5%)
- 96%+ of patients have both O and C

Abramowitz et al. (2009); Leckman et al. (2010)

OCD Course

- Usually gradual onset
- Chronic, unremitting course if untreated
- Symptoms can change across time, but will rarely disappear

Abramowitz et al. (2009);

Gender Differences

- Many more male youth are diagnosed, but no sex differences in adults
- Among men, hoarding associated with GAD and tic disorders, but in women with SAD, PTSD, BDD, nail biting, and skin picking

Vesaga-Lopez et al. (2008)

Comorbidity

- Up to 75% present with comorbid disorders
- Most common in pediatrics are ADHD, DBDs, depression, and other anxiety disorders
- Presence of comorbid predicts QoL, more so than OCD severity

Lack et al. (2009)

Comorbidity

- Different primary O/C are associated with certain patterns of comorbidity
 - Symmetry/ordering: Tics, bipolar, OCPD, panic, agoraphobia
 - Contamination/cleaning: Eating disorder
 - Hoarding: Personality disorders, especially Cluster C
- Most prevalent adult comorbid are SAD, MDD, alcohol abuse

Leckman et al. (2010)

Impact of OCD

- Almost *all* adults and children with OCD report obsessions causing significant distress
- Pervasive decrease in QoL compared to controls
- Youth show problematic peer relations, academic difficulties, and participate in fewer recreational activities

Lack et al. (2009); Fontenelle et al. (2010)

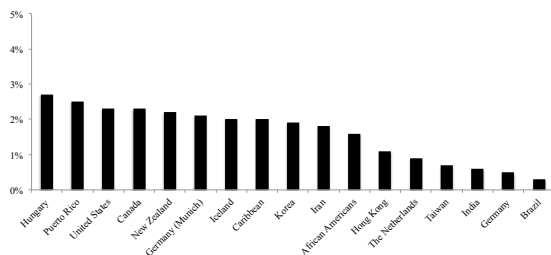
Impact of OCD

- Lower QoL in pediatric females
- Compared to other anxiety/unipolar mood:
 - Less likely to be married
 - More likely to be unemployed
 - More likely to report impaired social and occupational functioning

Lack et al. (2009); Abramowitz et al. (2009)

Cultural Aspects of OCD

- Similar epidemiological rates cross-culturally



Cultural Aspects of OCD

- Types of symptoms reported in various cultures varies little, but prevalence does
 - US Blacks more likely to show contamination issues, especially concerning animals
 - More religious Christians and Muslims place more importance on controlling their thoughts
 - High levels of scrupulosity in Jewish populations

What Causes OCD?

An Evolutionarily Informed Biopsychosocial Model

Etiology

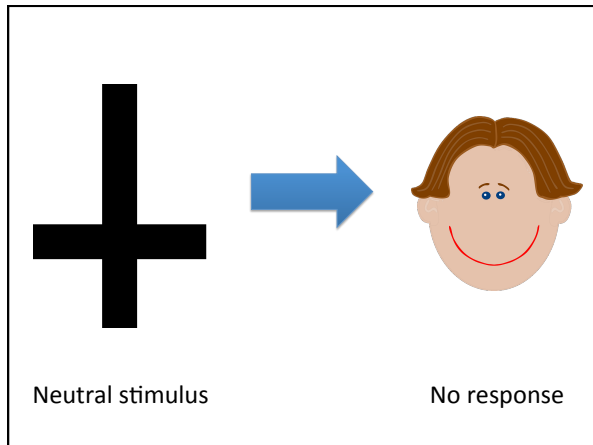
- Three primary perspectives
 - Psychological
 - Biological
 - Evolutionarily
- There is a need to integrate these into a evo-bio-psycho-social model, to help with a multi-level understanding of OCD

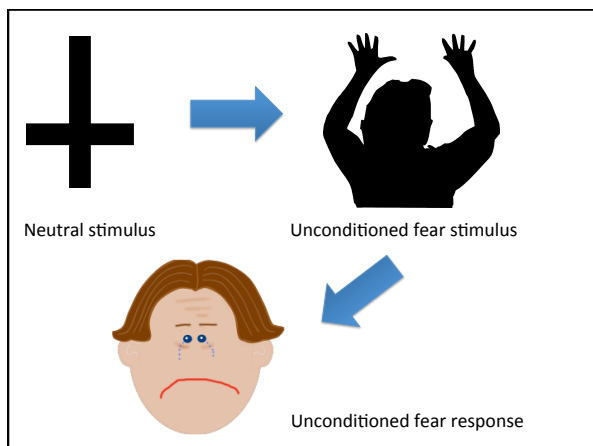
Psychological Causes

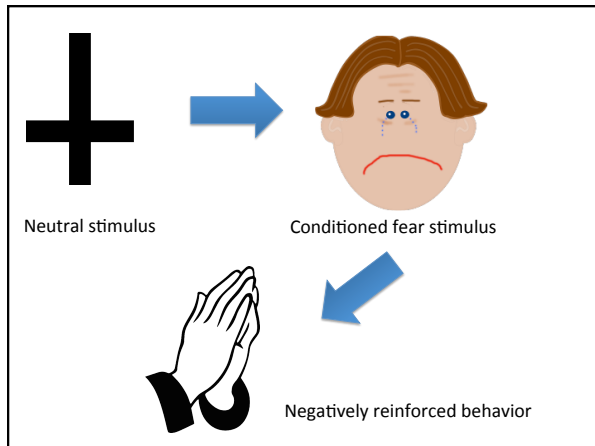
- Many non-empirical explanations put forth historically (demon possession, psychoanalytic)
- Three heavily evidence-based psych theories
 - Behavioral
 - Cognitive
 - Cognitive-behavioral

Behavioral

- Based on Mowrer's two-stage theory of fear
- Individuals first learn anxiety via a classical conditioning process, and then it is maintained via operant conditioning
- Neutral stimulus becomes a conditioned fear stimulus, and this fear is then maintained via negative reinforcement

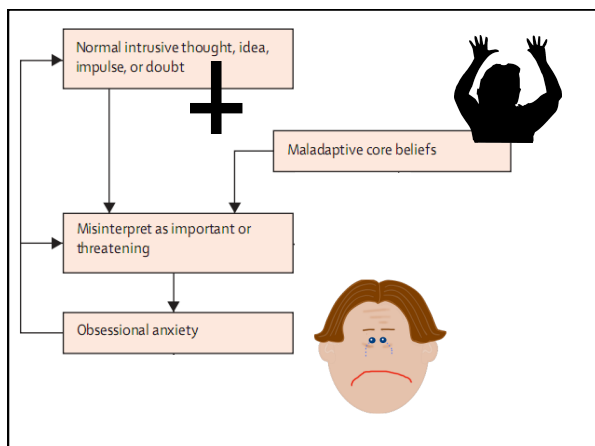






Cognitive

- Obsessions begin with a normal intrusive thought, which everyone experiences
- This interacts with a pre-formed belief system centered around exaggerated concerns and high expectations of negative consequences
- This then leads to marked distress and anxiety

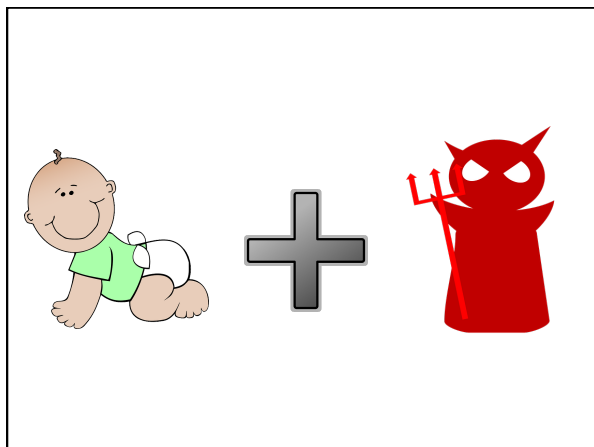


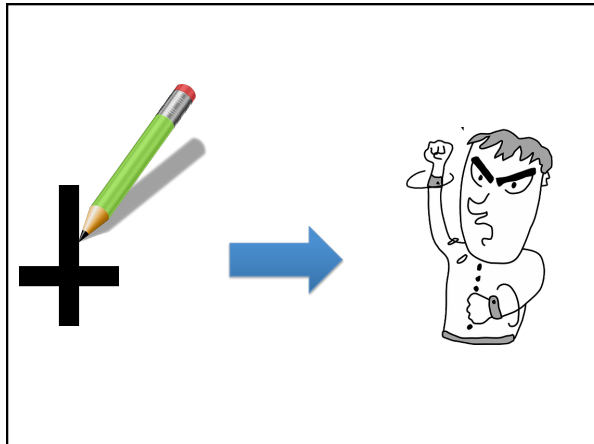
Cognitive-Behavioral

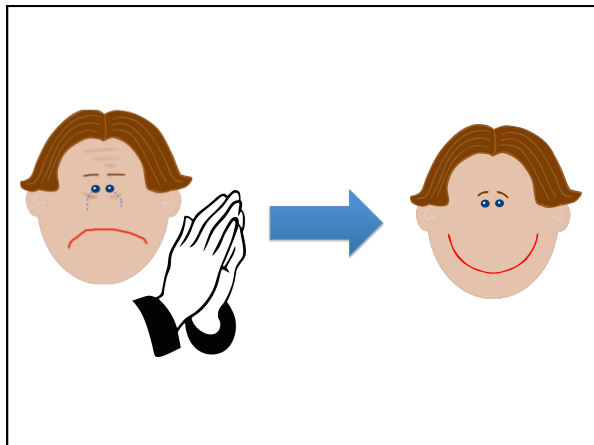
- Focuses on a bi-directional view of behavior and cognitions, both of which influence emotion
- Obsessions initially arise from dysfunctional beliefs that someone has
- Causes unwanted intrusive thoughts (which are normal) to be appraised as threatening or unacceptable, causing distress

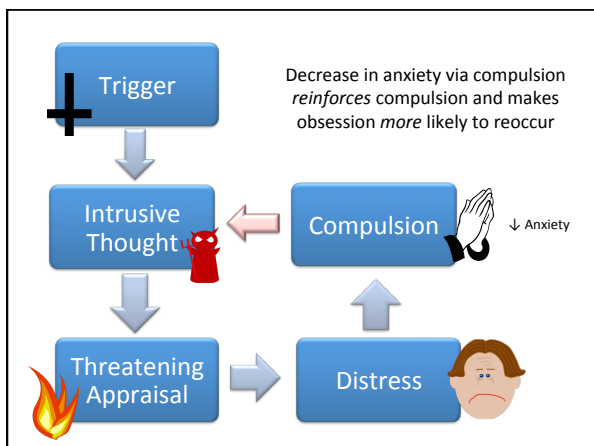
Cognitive-Behavioral

- Distress causes one to try and reduce it via some type of escape or avoidance behavior
- This in turn reinforces those maladaptive beliefs, perpetuating the cycle









Biological Causes

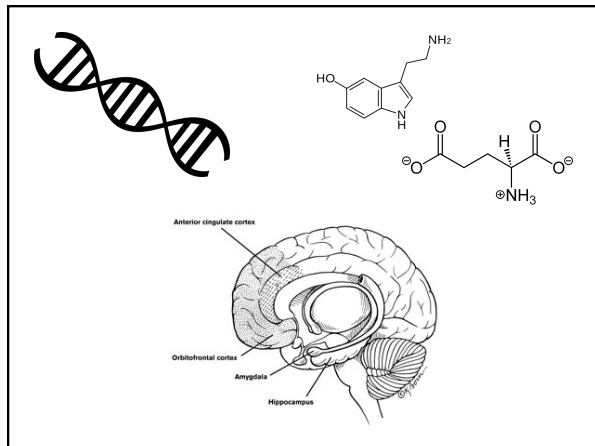
- Lots of research over past 20 years, but mired in controversy
- Twin studies show relatively strong influence of genetics on OCD development
 - Concordance rates of 50% in dizygotic, 80-90% in monozygotic

Genetics of OCD

- Molecular work (via segregation, linkage, and association studies) has been inconsistent
- Recent, large scale international work failed to find any SNPs with a genome-wide significance
- Points to need for new research methods, perhaps examining epigenetic expression

Structural Biology

- Damage to basal ganglia, cingulate gyrus, and the prefrontal cortex all appear to have a causal influence on development of OCD
- Decreased activity in caudate nucleus and orbitofrontal cortex
- Volume reduction in planum polare region



Evolutionary Causes

- Both biological and psychological components of OCD appear to have roots in normal functioning
- As such, OCD may be an exaggerated version of normal, evolutionarily-adaptive behaviors
- Responses to “threats” are overestimated, overwhelming an individual’s resources

O/C as Adaptive Traits?

- Adaptive traits have four hallmarks:
 - a) Have a lack of heritable variation
 - b) Have evidence of good design
 - c) Be evoked by appropriate triggers
 - d) Fitness must be reduced when it is absent
- OCD fits all four

O/C as Adaptive Traits?

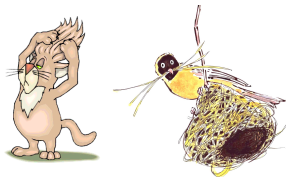
- Proximally, pathology should develop due to genetic or biological brain deficits
- Basal ganglia damage, for instance, leads to lack of behavioral inhibition, decreasing executive functioning over habitual behavior

O/C as Adaptive Traits?

- Relatively high, consistent prevalence rates of 1-3% cross-culturally suggests aspects of OCD have been selected for in our past
- One proposed mechanism involves our ability to imagine consequences of risky behaviors without having to engage in them
 - Also causes us to develop harm avoidance habits

OCD across Species

- The most common compulsions appear to have analogs in other mammal behavior
 - Hibernating
 - Organizing and collecting food
 - Grooming, cleaning
 - Nest building



From FAPs to OCD

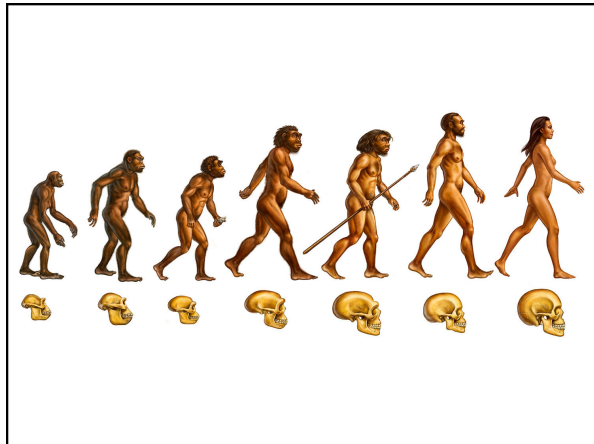
- These fixed action patterns then combined with our uniquely human meta-cognitive skills
- This allowed us to mentally represent future events, potentially exaggerating them and then responding accordingly

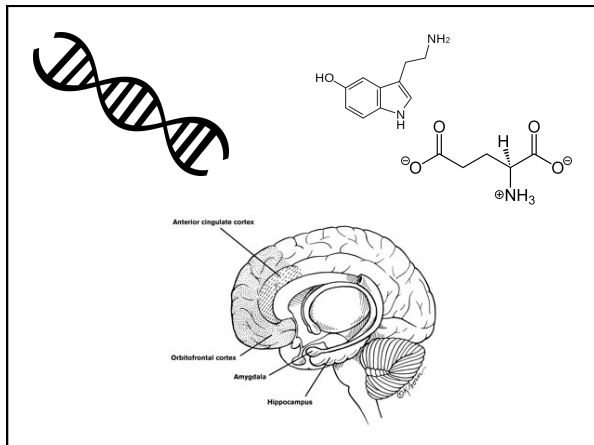
A Comprehensive Etiological Model

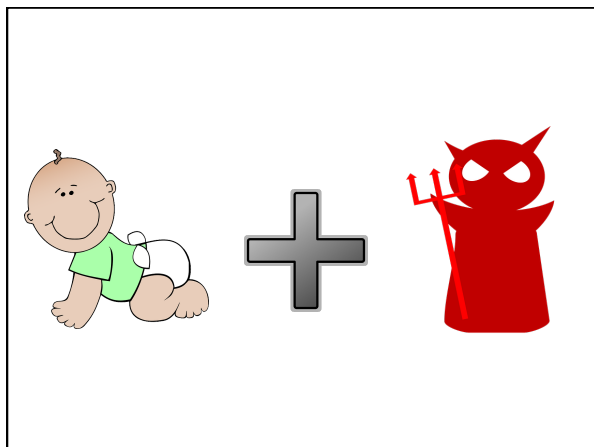
- Considering normative, adaptive behaviors and what they would look like when disrupted helps to understand ultimate roots of OCD
- Understanding biological aspects gives insight into a particular person's vulnerability to developing OCD

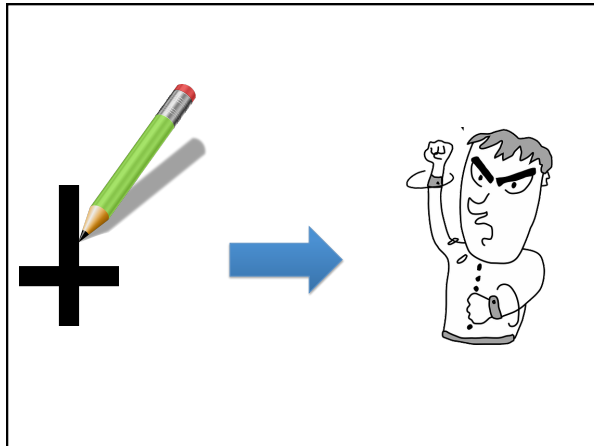
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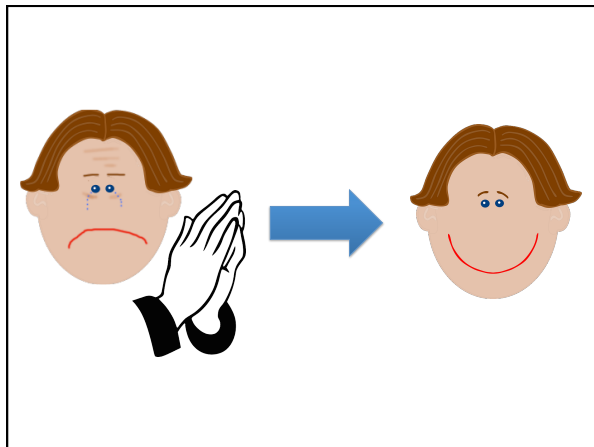
- Knowing the psychological underpinnings of OCD helps to provide both explanatory power at higher levels and informs interventions
- CBT using exposure with response prevention and cognitive restructuring
 - Causes behavioral, cognitive, *and* biological changes in people with OCD

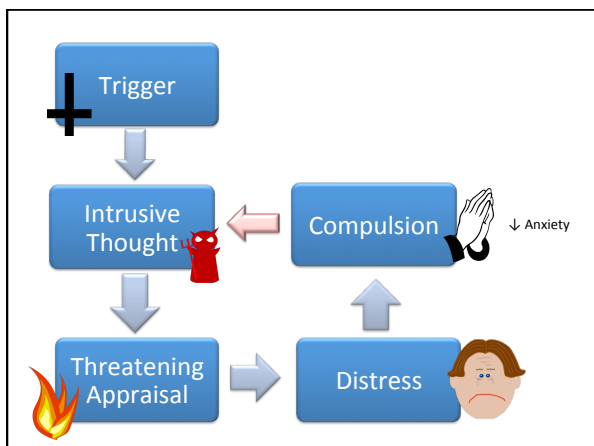








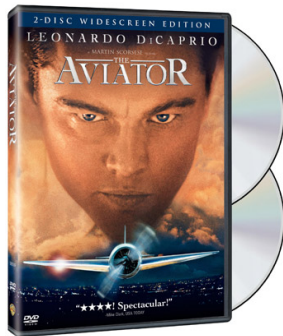




Conclusions

- Although people want simple explanations for phenomena, real life rarely cooperates
- We must embrace a multi-level explanation of mental disorders that encompasses evolutionary, biological, and psychological factors

Media Critique #1



Evidence-based Treatments

Pharmacology for OCD

- Overall, pharmacology (SRIs) shows large effect sizes in adults (0.91), but...
 - Most treatment responders show residuals
 - Very high relapse rate (24-89%)
- Only moderate effect sizes in youth (0.46)

Abramowitz et al. (2009)

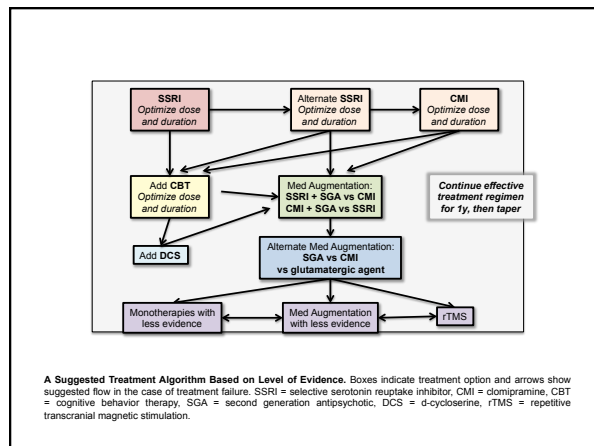
Pharmacology for OCD

- SRIs can be adjuncted with antipsychotics, but only 1/3 will respond
- Presence of tics appears to decrease SSRI effects in children, unclear in adults
- OCD w/ tics responds better to neuroleptics than OCD w/o tics

Abramowitz et al. (2009); Leckman et al. (2010)

Strength of Evidence for Meds

Medication	Type	Adults	Children
Clomipramine (Anafranil)	TCA	A	B
Citalopram (Celexa)	SSRI	B	C
Escitalopram (Lexapro)	SSRI	B	D
Fluoxetine (Prozac)	SSRI	B	A
Fluvoxamine (Luvox)	SSRI	A	B
Paroxetine (Paxil)	SSRI	A	B
Sertraline (Zoloft)	SSRI	B	A



CBT for OCD

- The treatment of choice, for both adult and child OCD; superior to meds alone
- Primarily focuses on EX/RP, which has shown effect sizes of 1.16-1.72 (88-95% improve)
- Low (12%) relapse rate, but up to 25% will drop out prior to completion of treatment

CBT Outcomes

- Those with hoarding symptoms appear to respond less well to treatment
- May need to add motivational enhancement techniques for those who are reluctant to engage in exposures
- Group therapy is as effective as individual

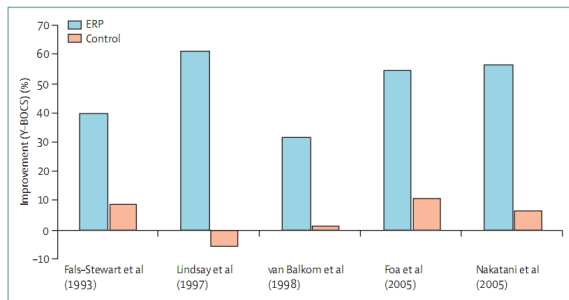
Abramowitz et al. (2009)

CBT Outcomes

- Those with comorbidity present higher severity, but respond equally well to EX/RP
- Comorbid anxiety or depressive symptoms tend to show improvements as well, even if not specifically targeted

Storch et al. (2010)

CBT Outcomes




Cognitive-Behavioral Therapy for Obsessive-Compulsive Disorder

Children vs. Adults

- The overall treatment (course, methods used, etc.) is highly similar
- Children do tend to require more support and scaffolding from parents
- Nonetheless, both youth and adults need to have a strong support system in place to assist with therapy and homework


Outline of CBT Treatment

- Typically between 10-16 sessions
- Includes identified client and and other family/support persons (parents, spouse, etc.)
- Four primary components
 - Psychoeducation, development of a fear hierarchy, exposures with response prevention, cognitive strategies




Psychoeducation

- Provide OCD information
- Correct misattributions
- Differentiate between OCD and non-OCD
- Describe treatment program



Parent/Support Tools

- Differential attention
- Modeling
- Scaffolding



Client Tools

- Learn to externalize OCD
- Learn how to rate anxiety levels

Considerations

- Keep information and activities developmentally appropriate
 - For young children (under 8), they may not need/benefit from the education portion
 - Older children and adolescents, however, should be included
- Deliver treatment “with the client” and not “to the client”

Session Sequence

- An initial assessment should be conducted prior to therapy starting
- Complete a clinical interview and symptom measures
- Helps determine differential or comorbid diagnoses and impact of OCD symptoms on functioning

Assessments

- Gold standard in assessments are clinician interviews like CY-BOCS & Y-BOCS
- Useful to assess impact of OCD and family accommodation with FAIS-C, COIS-R, FAS-SR
- Quick self-report of symptoms for screening purposes can use C-FOCI, LOI-C, or OCI-R

Session 1

- Results of assessment
- Provide education on
 - Etiology and course of OCD
 - Comorbidity
 - OCD vs non-OCD behaviors
- Give overview of treatment program
- Homework – daily record of OCD symptoms

Instructions: Please keep a daily record of **TWO** of your child's OCD symptoms. In the space provided below (feel free to use additional space if necessary) record the date, the specific symptom, the amount of time your child spent engaging in that symptom, how much disturbance it causes in the family, and how the parents are involved in the symptom.

Date	OCD symptom	Time spent	Family disturbance	Parent's involvement
T 5/17	At dinner, looked at roll for mold	5 min	Made us run late for basketball	Answered many questions
W 5/18	Refused to eat muffin for breakfast	10 min	Fought on way to school	Yelled at her
W 5/18	Asked if she would get sick from Lysol	1 min	None	Told her not to worry (2x)
Th 5/19	Looked at bagel for mold	4 min	None	Answered many questions
F 5/20	Asked about bottle of Windex	1 min	None	Told her not to worry (2x)
Sa 5/21	Looked at dinner roll for mold	1 min	She cried	Answered many questions
Su 5/22	Asked if she would get sick from Windex	1 min	None	Told her not to worry
M 5/23	Refused to eat toast	5 min	Late to school b/c made eggs	Answered many questions

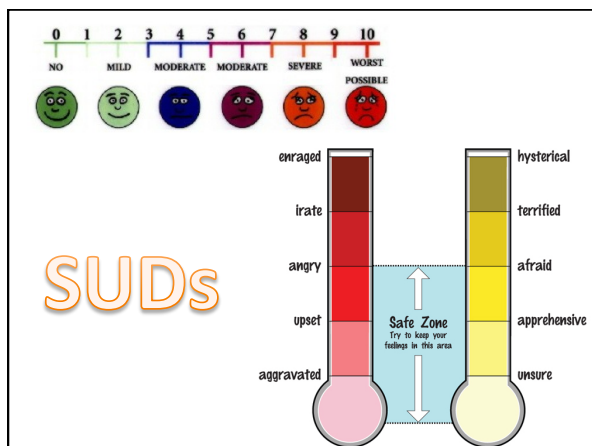
Session 2

- Review past session
- Start development of hierarchy
- Give overview of tools
- Introduce differential attention and reward plan
- Homework – Track two O/C symptoms, prepare rewards and rewards chart

Ranking	Description of Symptom	Label (O, C, ?)	Notes
1.	Worries about household cleaners	O	
2.	Avoiding eating off recently cleaned surfaces	C	
3.	Questioning parents about use of household cleaners	C	
4.	Worries about mold on food	O	
5.	Examination of food for mold	C	
6.	Worries about whether she had swallowed objects (e.g., paper clip)	O	
7.	Avoiding eating certain foods	?	Need more info

Session 3

- Review last week
- Introduce child to reward program
- Review OCD symptoms with child
- Introduce feeling thermometer/SUDS and symptom tracking (client tools)



Session 3

- Discuss praise & encouragement with supports
- Review level of family involvement in and accommodation of OCD symptoms
- Homework – Monitor symptoms, start reward chart for doing so
- New hierarchy (by therapist between sessions)

Exposure Techniques

- The common thread in effective anxiety treatments is hierarchy-based exposure tasks
- Controversy over exactly *why* exposure therapy works so well for anxiety
- Does *not* require extensive preparation to be effective and long-lasting

Rosqvist (2005)

Exposure Techniques

- Begin by constructing a fear hierarchy
 1. Generate specific feared situations
 2. Rate them using Subjective Units of Distress
- Continue by actually doing the exposures, working from lower to higher SUDs situations

Sample Fear Hierarchy

<i>Situation</i>	<i>Fear Rating</i>
Driving over the Steel Bridge at rush hour	100
Driving on the highway at rush hour, at dusk, and in poor weather	90
Driving on the highway at rush hour, in good weather	80
Being a passenger on the highway during rush hour	75
Driving on the highway in the middle of the day, in good weather	65
Driving on a city street at midday, when it is raining	65
Driving on a city street at midday, when the sky is clear	50
Turning onto a city street during traffic hours	45
Driving in a busy parking lot during business hours	35
Driving in an empty parking lot during "off" hours	25

OCRD Homework #2

- You will now create your own fear hierarchies
- Should include a wide range of fears and/or situations that are distressing
- Use SUDs rating to distinguish and order the hierarchy

Session 4

- Review last week
- Problem solve homework or reward program
- Continue hierarchy development
- Introduce arguing with OCD
- Conduct in-session exposure

Exposure Types

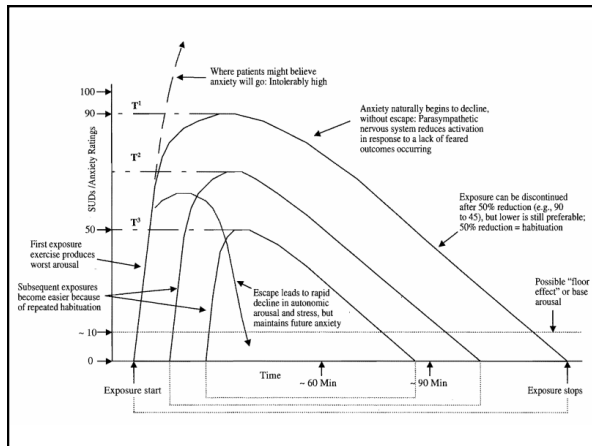
- Imaginal exposure tasks
 - Often used in the beginning, or when the child has abstract worries / fears
 - Allows for practicing coping skills before confronting the real situation
- In vivo exposure tasks
 - Often follow imaginal exposures, use a “live and in person” version of the feared situation

Exposures

- Exposure occur both in and out of session
- Requires cooperation of parents to facilitate successful homework exposures
- Should be similar to what is being done in session, using a hierarchy and SUDs ratings
- Internal and external rewards for successful exposure completion should be discussed beforehand

Exposures

- Ideal exposures are prolonged, repeated, and prevent the use of distraction behaviors
- SUDs decrease of at least 50%, with more being better
- May require shaping up to the more difficult situations, in terms of both time and use of distractors



Daily Practice Record

Task Description:

Reminder of Specific Strategies to Use:

Thermometer Ratings								
Date	What was attempted	Pre-task	1 min	2 min	5 min	10 min	15 min	20 min

Reward (describe what can be earned and what are the criteria for earning it):

Therapist Tasks

- Realize long-term benefits outweigh short-term distress, and communicate this effectively to the family
- Work collaboratively with the child and family to plan and execute the exposures
- Maintain rapport during exposures by building upon pre-established rapport

Therapist Tasks

- Do not allow avoidance or distracter behaviors during the exposure
- Modeling how to conduct exposures for the parents, so that they can perform them at home
- Be flexible and creative when dealing with less than optimal exposures and resistance

Obstacles for the Therapist

- I'm making my client more upset / anxious
- It's difficult to see people in distress
- Can be emotionally draining for some therapists
- May have to do exposures that you are not comfortable with

Session 4

- Discuss differential attention again – especially ignoring
- Review family involvement in OCD symptoms
- Problem solve homework compliance obstacles
- Homework – EX/RP task completion; family use positive attention and ignoring

Session 5

- Review last week
- Problem solve homework tasks
- Revise hierarchy of symptoms
- Review arguing with OCD
- Conduct in-session exposure

Session 5

- Discuss modeling
- Homework
 - Parental/spouse modeling, use of differential attention
 - Client completes EX/RP task(s) each day

Session 6

- Review last week
- Problem solve homework tasks
- Review disengagement efforts
- Revise hierarchy of symptoms & arguing
- Introduce scaffolding/coaching

Scaffolding

- Step 1 – Find out client child feels and empathize with the client
- Step 2 – Brainstorm with client how to approach the situation
- Step 3 – Choose option from Step 2 and act on it
- Step 4 – Evaluate and reward

Session 6

- Conduct in-session exposure
- Review scaffolding/coaching steps
- Homework
 - Parents/spouse use modeling, DA, scaffolding, continue disengagement, reward task completion
 - Client completes ERP task(s) each day

Session 7

- Review past week
- Problem solve homework
- Review disengagement
- Revise hierarchy of symptoms & check arguing
- Conduct in-session exposure to check scaffolding

Session 7

- Expand use of scaffolding outside of EX/RP practice tasks
- Homework
 - Encourage use of all parental/spouse tools
 - Have supports apply scaffolding outside planned practice times
 - Client complete ERP task(s) each day

Sessions 8-10

- Review past week
- Problem solve homework
- Review disengagement
- Revise hierarchy of symptoms & arguing
- Conduct in-session exposures
- Homework assignments

Further Sessions

- Take place two weeks after previous sessions
- Similar to sessions 8-10
- Focus on how to handle OCD future problems
 - Relapse prevention strategies
 - Dealing with symptom reappearance

Ending Therapy

- Sessions should be spaced further apart
- Some clients may need more booster sessions than others
- Plan on having long-term follow-up visits to check progress and troubleshoot

Novel Treatments for OCD

Giving Treatment a Boost

- CBT using EX/RP is the gold-standard, followed by a medication regimen
- But, some 20%+ of people with OCD may not respond fully to EX/RP
 - Number is much higher for meds
- This has led to augmentation efforts

Virtual Reality

- Has been used when *in vivo* exposures aren't possible or feasible
- Still in very early stage treatment, but development of [cheaper VR](#) and easier programming may lead to rapid advances

Motivational Interviewing

- Used to enhance desire for change and intrinsic motivation
- Somewhat mixed evidence to support the use of MI in conjunction with CBT
 - Research weighs slightly on the “yes” side in that it seems to enhance outcomes

Self-Guided Treatment

- Low levels of treatment seeking and low levels of EX/RP trained providers mean poor access in many areas
- Several computer-guided interventions have been found to be more effective than placebos (although not as good as in person)

Neurosurgical Interventions

- Three primary ones for OCD, usually as a “last resort” option
- Stereotactic ablative neurosurgery
 - Usually an anterior capsulotomy (a lesion in the anterior limb of internal capsule)

Neurosurgical Interventions

- Deep brain stimulation
 - Delivers high-frequency current to anterior limb of internal capsule, nucleus accumbens, or subthalamic nucleus
 - Most prominent and well-tested option
- Repetitive transcranial magnetic stimulation
 - Non-invasive, delivers weak electrical stimulation to dorsolateral prefrontal cortex or supplementary motor cortex

Media Critique #2

