New Directions in Exposure and Response Prevention for OCD

An Inhibitory Learning Approach

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The Nature of OCD

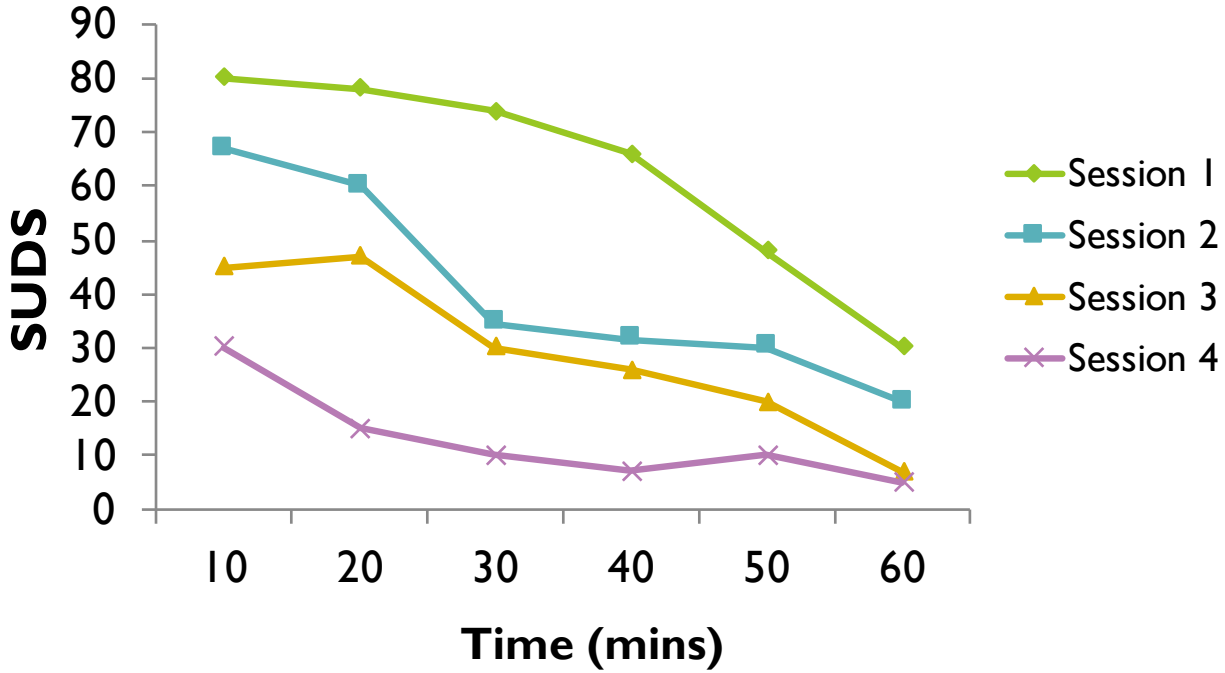
- Senseless intrusive thoughts, and the situations that trigger them, are misinterpreted as significant and threatening
  - Based on mistaken beliefs
  - Leads to obsessional fear
- Avoidance and rituals reduce obsessional fear
- Avoidance and rituals are reinforced by the reduction in distress they engender
- Avoidance and rituals maintain obsessional fears by preventing correction of mistaken beliefs

Treatment of OCD: ERP

- OCD remits when the person comes to believe their obsessions and fears are unfounded *and acts accordingly*
- Simply talking about probabilities is not as convincing as direct evidence from experience
  - People need to directly confront their fears (exposure) and drop their rituals (response prevention) to truly master them
- Exposure & response prevention (ERP) is the most powerful intervention in the treatment of OCD

Emotional Processing Theory (EPT), Habituation, and Exposure Therapy

- EPT emphasizes the importance of within- and between-session habituation
  - Provoke initial anxiety (SUDS)
  - Remain exposed until anxiety subsides naturally



Implications of EPT for OCD Patients

- It is assumed that people improve if
  - Self-reported anxiety (SUDS) decline during exposure trials
  - Exposure to the same stimulus evokes less anxiety from one trial to the next

Is Performance During Exposure a Reliable Indicator of Learning?

- Although habituation usually occurs during exposure, it's not a good predictor of outcome
  - Fear reduction during learning is not the same thing as safety learning
- Decline in anxiety across similar exposures is not necessary for long-term improvement
  - Successful response to exposure can occur in the absence of habituation

Craske et al. (2008)

Re-thinking Pathways to Long-term Success: An Inhibitory Learning (IL) Approach

- Research shows that fear associations remain intact during exposure while new safety learning is formed
  - The old and new associations compete with one another
- Important to maximize the likelihood that safety learning will inhibit access and retrieval of fear associations
  - Violate negative expectancies
  - De-contextualize inhibitory associations

Consequences of Over-Relying on Habituation

- Can contribute to return of fear and relapse
  - Patients view anxiety/fear/arousal/obsessions as a problem
  - Exposure used to control anxiety
  - Sets up the expectation that lower-level anxiety is safer or easier than higher levels
  - Inevitable surges of anxiety and arousal viewed as a failure

Using Exposure to Foster Fear Tolerance

- If ERP can instill greater *fear tolerance*, inoculate patients against return of fear
  - Lapse vs. relapse

- How to set up exposures
  - Opportunities to practice fear tolerance
    - OCD patients: "*Make anxiety go down*"
    - IL approach: "*Learn that you can tolerate anxiety*"
  - "Bring it on" attitude!
  - Be on the lookout for people who might use exposure to control their anxiety (as a safety behavior)

1. Frame ERP to Mismatch Expectancies

- Non-catastrophic exposure trials generate "non-threat" associations
- What are negative outcomes for OCD patients?
  - Immediate (e.g., throwing up, stabbing someone)
  - Long-term (cancer, becoming a pedophile)
  - Unknowable (hell, do I love someone?)
  - Intolerance of unpleasant internal experiences (body sensations, thoughts)

Clinical Implications: Expectancy Tracking

- Set up exposure to violate expectancies, not SUDS
  - Strength of negative expectancy (90% sure X will happen…)
  - Level of distress tolerance
  - Length of time patient can resist ritual
- Consolidate learning by asking patients to summarize what they learned (i.e., the discrepancy between what was predicted and what occurred)

EXPOSURE PRACTICE FORM

Date: _____ Time: _____ Description of task: _____

1. Feared outcome of exposure ("worst case scenario" hypothesis to be tested):

2. Safety behaviors to prevent:

3. How long do you think you can stick with the task?: _____

Every _____ during the exposure, rate the (b) strength of belief in feared outcome, and (b) confidence in your ability to tolerate distress from 0 to 100.

4. Anticipatory Ratings for (a) _____; (b) _____

	Trial 1	2	3	4	5	6	7	8	9	10
(a) Belief										
(b) Confidence										

	11	12	13	14	15	16	17	18	19	20
(a) Belief										
(b) Confidence										

	21	22	23	24	25	26	27	28	29	30
(a) Belief										
(b) Confidence										

5. What was the outcome of the exposure? What did you learn? (Specifically address #1 above)

6. What could you do to vary ("mix up") this exposure in the future?

2. Combine Fear Cues

- When an expected negative outcome fails to occur despite the presence of multiple fear cues, inhibitory learning is greater than when only a single fear cue is present
  - "Deepened extinction" (Rescorla, 2006)

- What are fear cues for OCD patients?
  - External (contaminants, leaving the house, numbers, religion)
  - Cognitive (obsessional thoughts, images, doubts)
  - Physiological (arousal)

Clinical Implications: Multi-Media Exposure

- Include multiple fear cues and multiple media in exposures
  - External fear cues along with imaginal exposure to the feared consequences of (or uncertainty about) doing so
    - Ex: Touch public toilet and imagine getting AIDS one day
  - External, cognitive, and physiological cues
    - Ex: Looking at teen bathing suit models, imagine engaging in sexual behavior, allow arousal to occur
  - Consider interoceptive exposure to provoke arousal sensations

3. Linguistic Processing

- Speaking about how one is feeling ("affect labeling") aids the development of non-threat associations
  - Different than cognitive therapy in which appraisals are changed

Clinical Implications: Put Feelings into Words

- Ask patients to label their feelings during exposure
  - "I'm feeling scared that reading about Jerry Sandusky's despicable behavior will cause me to become a pedophile"
  - "I am very afraid that when I touched the bathroom floor, I got urine and feces germs on my hands"
  - "I feel uncertain of whether God is angry at me for thinking curse words while sitting next to the bible"

4. Maximize Exposure Variability

- Introducing variability into exposure makes short-term learning more difficult, but enhances long-term retention and generalization of learning
  - "Desirable difficulties"

- Challenges for therapists

(Bjork & Bjork, 2006)

Clinical Implication: a) Variable Exposure Intensity

- Limitations of the traditional "gradual" exposure hierarchy
  - Over-reliance on habituation
  - Sets up the expectation that lower-level anxiety is safer or easier than higher levels
  - Anticipation of high items reinforces fear of anxiety

- Alternative "variable" approach…

Clinical Implication: a) Variable Exposure Intensity

- Why vary exposure intensity?
  - Tolerate exposure across a variety of emotional states
  - More opportunities for "surprise"
  - Preparation for real world settings

- In practice:
  - "To do list" as opposed to "hierarchy"
  - Select at random (as much as possible)

Clinical Implication:
b) Variable Exposure Contexts

- Enhances accessibility and retrieval of new safety learning (e.g., cues)

- In practice:
  - Patient practices exposure in as many contexts as possible
    - Situations and stimuli
    - Others present (therapist)
    - Other treatments (medication)
    - Time of day/week
  - Aim for practice in situations where symptoms are likely to be triggered

Clinical Implication:
c) Variable Practice Interval

- Temporally spacing learning trials results in better long-term retention of what was learned
  - More opportunities to strengthen long-term memory by forgetting and practicing re-learning associations
- In practice:
  - Expanding spaced scheduling
    - 2x/week → 1x/week → every other week, etc.

In-Situation Safety Behaviors

- Performed to (a) prevent feared outcomes and/or (b) reduce OCD-triggered distress
- Given role in maintenance of OCD, traditionally eliminated during "exposure and response prevention"
- Traditional justification for E + RP
  - Disrupts therapeutic information processing
  - Misattribution of safety
- But there's more…

Safety Behaviors Interfere with IL

Hypothesized to interfere with theoretical mechanisms of IL:

- Violate negative expectancies
- De-contextualize inhibitory associations
- Develop fear *tolerance*

Recommendations

- Continue response prevention
  - At the patient's pace
  - Consistent with "gradual" / "hierarchical" approaches
- Provide rationale for E + RP
  - Tie in theoretical model of OCD
- Continued research will be helpful

"Samantha"

- 30 yr old female (lives w/ husband)
- YBOCS = 27
- Obsessions: What if I "lose control" and murder loved ones, molest my nieces, or develop schizophrenia?
- Compulsions: Mental reassurance that personality isn't changing, mental phrases (e.g., "I'm ok"), reassurance from husband
- Avoidance: Potential weapons (e.g., knives), nieces, news stories about violence, information about mental illness
- Onset: Adolescence
- No history of abuse, violence, or other psychiatric diagnoses

Samantha's Exposure List

Item	SUDS
Read about schizophrenia	40
Write story about molesting nieces	85
Hold knife next to cat	80
Rough-housing with young nieces	70
Write story about murdering husband	90
Read news stories about child molesters	60
Sleep next to husband with knives on nightstand	90
Read news stories about murderers	65

Samantha's Multi-Modal Exposures

Item
Read about schizophrenia
Write story about molesting nieces while looking at pictures of nieces
Hold knife next to cat while listening to news story about psychotic break
Rough-housing with young nieces
Write story about murdering husband
Read news stories about child molesters after interoceptive exposure
Sleep next to husband with knives on nightstand
Read news stories about murderers

Samantha's Varied Context Exposures

Item
Read about schizophrenia before bed and while eating lunch
Write story about molesting nieces
Hold knife next to cat while anxiety sensation is high (e.g., after caffeine)
Rough-housing with young nieces while mother is around and while alone
Write story about murdering husband after argument or sad movie
Read news stories about child molesters
Sleep next to husband with knives on nightstand
Read news stories about murderers

Samantha's Response Prevention Goals

- Discontinuing "checks" and mental reviewing to test whether she is "normal"
- Fade out self-talk/phrases that assure she is "ok"
- Cutting back on asking husband questions