

Symptoms of Depression

Psych 234: Lecture 2

People who are depressed tend to over-report

Prevalence of MDD in women who gave birth and those in the same age who didn't give birth is almost identical

30-40% of postpartum depression starts in pregnancy

75-90% of women have depressive symptoms for 2 -3 days after birth

Substance abuse is higher for men even though men are less likely to get depressed

Women care about a much wider range of people than men (men care about their families and that's it): more opportunity for negative life events to affect you

Should anger be a part of depression to include more men?

Is it easier for women to get a diagnosis than men? Because they express sadness more?

Paper: https://link.springer.com/chapter/10.1007/978-94-009-5115-0_25

Risk factors vs. protective factors

Comorbidity: depression goes with anxiety

Depression is highly comorbid with heart disease and smoking

Psych 234: Lecture 3

Found that religious attendance protects against major depression

"What is perhaps most remarkable about depression is there has been far more success in treating this illness than in understanding it"

Can't go from what the treatment was to what the cause of the disorder must have been

95% of the medication for depression is prescribed by the GP (spends ~5 mins on each patient)

Is it better to overprescribe than it is to underprescribe? No real costs of Prozac (cost of a false positive is not a big deal)

Used to be a spike in suicide cases in a month to six weeks after medication

People kill themselves with the energy that they get from the medication (overdose)

Can't kill yourself with Prozac

Self Report Measures

None of these yield a diagnosis, measures of severity/frequency of symptoms

Beck Depression Inventory

Inventory to Diagnose Depression (tracks with the DSM) but never really gets heard

What are the ways to identify suicidal tendencies?

Two strongest predictors for suicide?

Hopelessness (age effect)

Assessment of Depression in Children and Adolescents

Sensitivity vs. specificity

How many true positives are you calling them depressed?

Always a tradeoff

Psych 234: Lecture 5 - Cognitive Aspects of Depression

Octopi: species with the earliest split from our human tree in phylogenetically, closest thing living on this planet to aliens

Cognitive triad: thoughts about the self, the world, and the future (I'm no good, the world sucks, and it's never going to get better) -- Beck argued that it causes people to be depressed

Cognitive schemas: Piaget (first person to develop schemas)

Behavioral confirmation: start acting in ways to confirm your expectations

Depressed people's schemas are not always there (not always active), and when they are not active but they're there, they are latent

Not conscious, until something activates them

Beck's cognitive model of Depression

(early experience)

Do depressed people want to change their schema?

Beck study: showing you negative/positive things about you

Depressed people focus more on the negative things

Illusion of Control Study

Method variance: is it really a substantive finding that depressed people have more negative thoughts (measuring the same thing for independent dependent?)

Stroop Effect

Content of stimulus is interfering with the required response

Depressed people are naturally "primed" with negative

Response latencies to negative, neutral, and positive words: take much longer

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Inhibition: Modified Sternberg Task

(Learning, Inhibition, Test)

Depressed people: intrusions of negative stimuli that you can't expel from working memory; takes them longer to be correct

Anhedonic: inability to feel pleasure

If there is evolution, why are people still depressed? Maybe there is something adaptive, evolutionary about depression (Randolph Nessler)

Maybe for social anxiety?

Self Referential Encoding Task

Cognitive Functioning in Girls at Familial Risk for Depression

Median age of onset of depression: 13/14/15

Dot probe test

Daughters of depressed mom/dads (but daughters are not depressed)

Attentional Biases for Sad and Happy Faces in Low-Risk and High-Risk Girls (Joormann, Talbot, and Gotlib)

Attention Bias Training: train participants to attend away from sad stimuli and toward happy stimuli

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Parental Bonding Instrument: assessing adults perceptions of their parents behaviors when they were growing up

Less caring and more control: affectionless control

Whenever you ask depressed people to rate anything, is going to be bad

People don't want to be around people who are depressed and so you stop seeing them -- why social functioning goes down

One of the characteristics of depression is dependency (so early marriage) to need that support, inter personally, positive odds ratio

So what type of person do women marry? Someone who wants to feel needed (not healthy functioning, usually older)

Comorbidity is a huge risk factor for early marriage

Divorce rate for depressed: 12x higher than normal divorce rate

Longer you are with someone who is depressed, the higher level of criticism

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Psychopharmacology Bridge

People get depressed from untoward stress (Diathesis Stress Model)

Why depressed people become psychotic?

Delusions (guilt, nihilism)

Tend not to respond to antidepressants

Cushing's Disease

Glutamate (excitatory), GABA (inhibitory)

Ketamine -- horse anesthetic, now commonly used in anesthesia

Drug of abuse (some people become addicted)

Psych 234: Lecture 10

- Getting depressed/nondepressed people's phones
- Body dysmorphia and depression
- Genetics and Mood Disorders
 - 23 and me: I'd rather not know
 - What if there was something you can do about it?
- To get from genes to symptoms, there's a whole host of mechanisms (these are called endophenotypes: interim characteristics)
- Keeping diaries, higher T cell count, higher inflammatory functioning
- Findings from twin studies suggest a moderate genetic influence on depression in community standards
- Eye color: reared apart or reared separately, doesn't matter
- Children of parents with depression have about 2-3x the risk of having depression
- 5-HTTLR/PR Polymorphism in Depression
- Is there a gene for smoking?
 - No
- No Gene for schizophrenia
 - Polygenic: more than one gene involved
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Psych 234: Lecture 12

Neural aspects of Depression:

Why aren't we using neuroimaging as a way to diagnose certain diseases?

What else do we need to know in order for neuroimaging to be used widely?

How does pay structure work?

Your P gets paid to see you, and pays when they refer you to a specialist: there is a financial cost to refer you so anything they can do inhouse is better financially for them

Medial pre frontal cortex: thinking about yourself, me me me me (self, self-referential)

Psych 234: Lecture 13

Guest Lecture: Chuck Debutista

Biological treatments:

First Generation ADMs: those were accidental, tricyclic, earlier ones you can overdose — week for lethal dose

Second generation ADMs: SSRIs, you can with these but not as easy

SNRI; blocks both serotonin and norepinephrine

Should we treat depression as diabetes? Relying on SSRIs for the rest of our life
For most people, it's not an acute illness: it's a chronic, intermittent illness

Cause sexual side effect — low libido and delayed orgasm, don't get dramatically better over time

Relationship between sleep and suicidality?

Causes for insomnia: anxiety, depression

SSRIs suppress REM sleep

Post partum depression: time in their life when women are most vulnerable to depression

Story of woman with the candlestick and the butcher knife

Women killing their children: post partum psychotic depression

Predictive ways to catch post partum depression (now considered in the bipolar spectrum until proven otherwise)

Seasonal Depression:

Photo therapy

When might you use medication as opposed to psychotherapy

Choice of the patient

Many patients in Silicon Valley who don't want to invest in psychotherapy

Not that many approved ADMs for kids — they don't do as well with the ADMs so psychotherapy plays an even more important role in kids

Black Box warning for ADMs in kids: higher risk for suicidal thoughts and gestures, pediatricians are more hesitant to prescribe to kids now

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Treatment response: $\frac{2}{3}$ or 66%

This is the reason it's so economically and personally costly: for a third of people, nothing works

Can't measure thoughts so how do you know cognitive therapy works?

Correct faulty info processing

Modify dysfunctional beliefs

Provide skills and experiences that create adaptive thinking

In first therapy session:

- Socialize to the model

- Previous experience of therapy and expectations

- Contracting

- Assessment

- Problem list

- Goal setting

- Agenda setting

Goal setting

- Specific

- Measurable

- Achievable

- Realistic

- Time limited

Encouraging people to be aware of negative thoughts when they occur

Write down automatic thoughts using daily monitoring

Psych 234: Lec 16

Boys are four more times to die from suicide than girls

At least 70% = 80% of children with depression can be treated effectively

Without treatment, almost half will have another episode

Finality of death -- for kids? At what point do they understand death

Dolphin (at what point is it grief, and at what point is it to end their life)

CBt for kids is not much different from CBt for adults

- Can't use with 6 and 7 year olds

- Use with adolescence

Interpersonal Therapy (address problems in their relationships with family members and friends)

Roles complex, roles transition, grief,

Cognitive Behavioral Group Therapy with Depressed Adolescents

With treatment, you want to strengthen functional connectivity between amygdala and dorsal pre frontal cortex

Are we wired to be social?

Harlow's early work about people being raised with no social interactions -- all sorts of problems

Biological preparedness: we are biologically prepared to function in certain ways that are completely independent of environment

- E.g. using lab reared monkeys

Depression in Later Life

- Way more prevalent in early life

- Later life: emotional functioning improves,

Emotional well being of older adults is better than younger adults

Younger people have higher rates of loneliness than older people

Motivation to live, motivation to live well

Horrendous increase in suicide by white males

Psych 234: Tiffany Ho (Guest Lecturer)

Identifying Who is at risk

- Epidemiological data from World Mental Health Survey

Who is at risk for suicide?

- Having a parent/family member

- Negative life events

- Genetics of Suicide

About a third of ideators, transition to attempt

60% of attempts occur within first year of suicidal ideation onset

Do these risk factors predict?

Is it possible that there are just no risk factors? It is just so anomalous of a behavior. Suicide goes against what we are evolutionary. Dolphins in captivity are known to kill themselves. Dolphins brains are advanced compared to other species. -- tie back to babies idea of death

There were gorillas whose mother lost their offspring and would just stop eating (and die). Are they dying because they are grieving or because they want to kill themselves and they understand the concept of death and the self.

Measuring the Suicidal Mind

IAT

Real Time Monitoring

Neuroimaging

Smaller gray matter volumes in dopaminergic regions implicated in reward processing

Real Time Monitoring

Active: requires response from individual

Found that hopelessness was unrelated to subsequent suicidal ideation

Ratings related to sadness, tension, and boredom predicted thoughts in the following hours

Being with others or in a leisure environment decreased probability of suicidal ideation

WSJ: Does your Smartphone Know if You're depressed?

'Behavioral biomarkers' for mental illness; facial expressions, voice, language

TechCrunch: Facebook rolls out AI to detect suicidal posts before they're reported

Neuroimaging (can be used as a more objective marker)

2017 Nature Behavior: Machine Learning & fMRI

Robert Munoz

Priest -> Psychologist (still helping people but with science)

Psych 234 Lecture 19

Why insomnia is important according to sociobiologists -- as we evolve as a species, useful to have one awake at all times

Moderators:

Having a depressed mom increases your risk for other things: depression, anxiety, substance, ADHD

If there is a single gene that caused depression that gets passed from parent to child, then you wouldn't see it in other disorders. Not specific enough so we rule out a gene for depression. Depressogenic environment? There is nothing that seems to be specific in depression.

You don't inherit depression. You are not born depressed. So you inherit a set of genes, what do they predispose you to. You can inherit a tendency to experience depression, you also inherit vulnerabilities to personality traits or cognitive style which themselves increase risk for development of depression

Shyness, neuroticism, low self-esteem, low sociability. It's a mechanism, it's not depression. Otherwise, it would be like inheriting blue eyes.

Innate Dysfunctional Neuroregulatory mechanisms

Abnormal fetal developments caused by the mothers' depression during pregnancy

What biological depressed look like?

Bayley Scores of Infants of Depressed and Nondepressed Mothers

Once you start alienating people, it's really hard to get them back. Which is what happens to social functioning of (formerly) depressed patients.

Psych 234: Lecture 20

Post partum depression in black mothers

Instagram Recommendations for Predicting Depression

<https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-017-0110-z>

Relation between Gut and Depression

Body Image and Depression

Father's Relationship with Kids and Later Depression