Identification and Treatment of Adolescent Anxiety and Depression – NA/AN/NH/PI

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Epigenetic Factors of Native Populations Mental Health Issues

- High level of epigenetic contributors to Mental Health issues
  - 1.5X higher serious psychological distress than general population
  - 2X more likely to be unemployed
  - 2.5X rate of victimization of whites
  - 3X less likely to have insurance as whites
Coping with crippling social anxiety through moderately debilitating alcoholism.

Coping with moderately debilitating alcoholism through self-enforced social isolation.
Anxiety Statistics

• Life prevalence of any anxiety disorder 28.8%

• Onset usually childhood or adolescence

• 50% of affected adult first symptoms before age 11 yrs.

• Worldwide prevalence of Child/Adolescent Anxiety DO 6.5%
Prevalence of Anxiety Disorders in Adolescents

- Separation Anxiety 2-12.9%
- Panic Disorder
- Agoraphobia 4.5%
- Specific phobia 2.6-9.1%
- Social Anxiety 1.6%
- Acute Traumatic Stress Disorder
- Post Traumatic Stress Disorder 6.3%
- Generalized Anxiety Disorder 2.9-4.6%
Adolescent Anxiety Symptomatology

Behavioral

Cognitive

Physical
Major Depressive Disorder in Children

Persistent Depressive Disorder affects approximately:

- 3% age 6-12 years
- 6% age 13-18 years
Major Depression....

• 50% Adolescents with depression diagnosed before adulthood
• 70% Depression episode #1 recurrence within 5 years
• Male:Female 1:1 in childhood
• Male:Female 1:2 in adolescence
• Male:Female 1:3 at onset of puberty
Native Youth Depression Comparison

• 2013 CDC YRBS Data
  • 39% Native American
  • 37% Latino
  • 29% Asian
  • 28% African American
  • 27% Caucasian
Risk List for Adolescent Depression

• Comorbid psychiatric/medical illness
• Parents/siblings with depression
• Trauma exposure/Family/Relationship/Community
• LGBTTQQAA/Sexual abuse
• Substance/Alcohol use
• Stressful life events i.e. breakup with boy/girl friend
• School failure/dropout/pressure
• Bullying/Cyberbullying/Social media
• Sleep Deprivation
Sleep Deprivation

• 9.5-10 hours required during adolescence for normal growth and function (More for growth spurt)
• Females more vulnerable to sleep deprivation depression than males
• Leads to weight gain/obesity
• Decreased ability to regulate negative emotions, worsened mood
• Males had stronger suicidality association
Sleep Deprivation can lead to...

- Anxiety
- Irritability
- Poor Emotional Regulation
- Poor Concentration
- Fatigue
- Craving Carbohydrates
- Oppositionality
- Sadness
- Tardiness/Truancy
- Poor Motivation
Common Symptoms of Depression in Adolescents

• Insomnia
• Poor concentration
• Somatic complaints:
  • headaches
  • stomachaches
• Anxiety
• Binge eating – especially at night
• Self harm
• Substance abuse
• Risk taking
• Fatigue
• Irritability
• Worry
• Social Withdrawal
Screening for Anxiety & Depression
No single biomarker has been found for depression

We rely on self-rating and assessment from parents, teachers and clinicians
When to screen?

• Broad screening
  • Every visit

• Psychosocial risk screening
  • Every visit

• Specific measure screening
  • Positive indicators to broad screening or risk screening
  • Gut instinct should never be ignored
## Risk Factor Screening

- Treatment history
- Trauma history
- Family history
- School issues
- Contagion suicide
- Sexual issues/Pregnancy
- Substance abuse

- Changes in behavior
- Social pressures/Bully
- Community pressures
- Relationship issues
- Sexuality
- Adoption/Foster Care
Some Screening Tools

Depression

• Beck Depression Inventory
• Children’s Depression Inventory 2 (CDI – 2)
• Center for Epidemiological Studies Depression Scale for Children (CES-DC)
• Patient Health Questionnaire – 9
• Mood Disorders Questionnaire

Anxiety

• GAD – 7 (Generalized Anxiety)
• Social Phobia Inventory (SPIN)
• Children’s Yale-Brown Obsessive Compulsive Scale (CYBOCS)
Shortcut for Diagnosing Depression

- **S**  Sleep disturbance/Somatic complaints
- **I**  Loss of Interest/Pleasure
- **G**  Guilt
- **E**  Energy decrease
- **C**  Concentration loss
- **A**  Appetite Change/Agitation
- **P**  Psychomotor retardation/social withdrawal
- **S**  Suicidality/High risk behavior
Strengths and Difficulties Questionnaire

- Total difficulties
- Emotional symptoms
- Conduct problems
- Hyperactive score
- Peer problems
- Prosocial behavior scale
- Parent and Teacher forms
- Self-report form for Adolescents
- Online scoring
American Psychiatric Association DSM - 5

• Available **free** for clinical use
• Rapid clinical screening and treatment guidance
• Child, Adolescent and Adult screeners
• Cultural considerations section
• [https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/assessment-measures](https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/assessment-measures)
Frequency of Use of Screeners

• To track change over time, complete at regular intervals

• Consistently high scores in a particular domain may indicate significant/problematic symptoms needing further assessment, treatment and follow-up
And then... there was nothing.
Suicide Among Ethnic Youth age 18-24  

CDC 2009

Chart Title

- Hispanic
- non Hispanic Black
- AI/AN
- PI/Asian
- non Hispanic White

Suicide rates among different ethnic groups for boys and girls.
SAD PERSONS Screening Suicide Risk

- S – Sex
- A – Age
- D – Depression
- P – Previous Attempts
- E – Ethanol Abuse
- R – Rational thinking is lost
- S – Social supports lacking
- O – Organized plan
- N – No significant other
- S – Sickness/Stressors
Approved Medications for Adolescent Anxiety and Depression
<table>
<thead>
<tr>
<th>Antidepressants Anxiolytics</th>
<th>FDA Approved</th>
<th>Age Range</th>
<th>Dose Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine MDD</td>
<td>8+</td>
<td>10-20mg/day</td>
<td></td>
</tr>
<tr>
<td>OCD</td>
<td>7+</td>
<td>10-60mg/day</td>
<td></td>
</tr>
<tr>
<td>Fluvoxamine OCD</td>
<td>8+</td>
<td>8-11 yrs. – 25 – 200mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12- 17 yrs. – 25 – 300mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sertraline OCD</td>
<td>6+</td>
<td>6-12 yrs. – 25mg – 200mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13-17 yrs. – 50mg – 200mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escitalopram MDD</td>
<td>12+</td>
<td>10-20mg</td>
<td></td>
</tr>
<tr>
<td>Duloxetine GAD</td>
<td>7+</td>
<td>20mg – 60mg/day</td>
<td></td>
</tr>
<tr>
<td>Clomipramine OCD</td>
<td>10+</td>
<td>25mg– 200mg/day or 3mg/kg/day – whichever less</td>
<td></td>
</tr>
</tbody>
</table>

- 14 Antidepressants
- 34 trials analyzed
- 5260 participants aged 9-18 years

Ranked by:
  - Efficacy
  - Tolerability
  - Acceptability
  - Associated Serious Harms

Zhou X, Xie P, Cipriani A, et al. 3703
Lancet study Medications **ineffective/Intolerable** for Depression in Children/Adolescents 2016

- Venlafaxine – increased suicidal ideation and attempts
- Nortriptyline
- Amitriptyline
- Imipramine
- Desipramine
- Duloxetine
- Paroxetine
- Citalopram
- Mirtazapine
- Sertraline
- Nefazadone
- Escitalopram
Some details...

• Least effective
  • Nortriptyline

• Worst tolerability
  • Imipramine
  • Venlafaxine
  • Duloxetine

• Highest suicide risk
  • Venlafaxine
  (higher risk than placebo)
Given intolerability issues from this study we have...

**Depression**
- Fluoxetine

**Anxiety**
- Fluoxetine
- Fluvoxamine
- Clomipramine
FDA Approval For Children with Anxiety....with notations

Generalized Anxiety

- Duloxetine
  - Worst tolerability,
  - Deadly in overdose

Obsessive Compulsive Disorder

- Clomipramine
  - Deadly in overdose
- Fluoxetine
- Fluvoxamine
- Sertraline
FDA Warning

- Issued warning October 2004 antidepressant medications may increase suicidal thoughts/behavior in small number of children and adolescents.
- Response to study in England on paroxetine/venlafaxine where increased suicidal ideation.
- Issued 3 days after action taken in England to prohibit paroxetine/venlafaxine use in children and adolescents.
More information on FDA warning

• FDA has not prohibited or removed these medications.
• No suicides were reported in the studies leading to the warning.
• After warning issued, over 4 years there was a 44% increase in suicides in countries where warning placed on all antidepressants (USA, Canada, Finland)....most female, most suffocation/strangulation
Side effects:
Fluoxetine/Fluvoxamine/Sertraline/Clomipramine

- Headache/ Dizziness
- Stuffy nose
- Sexual complaints
- Anxiety
- Insomnia/Awakening
- Palpitations
- Change in appetite

- GI complaints
- Drowsiness
- Dry mouth
- Weight change
- Increased QTc
- Flatulence (Clomipramine)
- Vivid Dreams (escitalopram)
Fluoxetine

- Depression 10-20mg/day
- Anxiety 10-20mg/day
- Most common SE: Decreased Libido
- Least likely to cause withdrawal symptoms
- Starts about 3 days after last dose taken
  - Nausea
  - Nervousness
  - Insomnia
Fluvoxamine

• OCD: IR start 25mg q HS
  • increase gradually by 25mg as needed
  • max 300mg/day
  • Divide doses beginning at 50mg
  • Most common SE: insomnia

• Withdrawal: within 36 hours of last dose

• Agitation/Irritability
• Muscle aches
• Anxiety

• Tingling sensation
• Suicidal thoughts
• Dizziness

• GI distress
• Confusion
• Mood swings

• Sweating/Hot/Cold flashes
• Depersonalization
• Insomnia
Sertraline

- Anxiety: 50mg/day
- may increase gradually
- max 200mg/day
- Most common SE: “Rumbly” stomach, Headache
- Withdrawal: within 36 hours of last dose
  - Dizziness Insomnia/Nightmares Weakness
  - Shaking Mood Swings Agitation
  - Tingling Memory loss Suicidal ideation
  - Anger Anxiety/Panic Nausea/Vomiting/Cramp
  - Confusion Vivid dreams Poor concentration
Escitalopram

• Depression: 10mg/day
• Recommend on full stomach, otherwise nausea
• Most common SE: Nausea, Headache, Sexual
• Withdrawal begins within 48 hours of last dose
  • Nausea/ Diarrhea  Anxiety/Irritability  Suicidal thoughts
  • Cramps  Aggression  Stuffy nose
  • Poor concentration  Blurred vision  Sweating
  • Constipation  Crying spells  Insomnia
  • Dizziness  Eye floaters  Depersonalization
  • Headache  Electric shock sensations
Clomipramine

• Anxiety (OCD):
  • 25mg/day may increase gradually
  • max 3mg/kg/day or 200mg (least amount)
  • Most Common SE: Flatulence, Dry mouth

• Withdrawal: 3 days to 2 weeks after last dose
  • Strange dreams
  • Headache
  • Nausea
  • Stuffy nose
  • Irritability
  • Restlessness
Duloxetine

• Generalized Anxiety
• 30mg/day x 2 weeks, then may increase to 60mg
• Withdrawal begins about 36 hours after last dose
  • Dizziness  Nightmares/ Insomnia  Headache – BAD
  • GI distress  Anxiety/Irritability/Agitation  Seizures
  • Tremors  Paresthesia  Sleep disruption
  • Sweating  Hallucinations  Aggression
  • Fatigue  Weakness  Self injury
  • *Suicidal ideation/attempts*
Caution

• Serotonin Syndrome

• Overdose
  • More likely (in order) to be with:
    • #1 acetaminophen or ibuprofen
    • #2 SSRI
    • #3 Atypical antipsychotic
    • #4 Antihistamine
  • Death was most likely with Atypical antipsychotics and antidepressants

• Prolonged QT Syndrome
  • If child has history (or family history) of fainting, seizures, arrhythmias or sudden death – check ECG for LQTS
Hey, you don’t need to keep that in there.

Come on.
Therapy

• Cognitive behavior therapy
• Play therapy
• Family therapy
• Exposure therapy
• Individual psychodynamic therapy
• Group therapy
Cognitive Behavioral Therapy

• Works to change beliefs and interpretations toward a more healthy persona

• Cochrane review of 41 studies, analyzed 26 studies
  • Ages 4-18 yrs.
  • 59.4% remitted from anxiety disorder with CBT (17.5% waitlist controls remitted)
  • No direct comparison between CBT and other therapies
  • After CBT 40% continued to have significant disturbance
Pearls
When starting an antidepressant . . .

• FDA warning for Suicidal Ideation
• Close monitoring for suicidal ideation/attempt
• Frequent visits with doctor/nurse/therapist to help with monitoring
• Safety precautions
• There is never a guarantee....when suicidal attempt suspected, hospitalize
Basic Guideline Using FDA
Indications plus
Tolerability/Effectiveness Study
Mild to Moderate Depression

Therapy

Moderate to Severe Depression

Therapy

+ Fluoxetine

Poor/No Response

Escitalopram

Child/Adolescent Psychiatrist
Mild to Moderate Generalized Anxiety → Therapy → Duloxetine

Moderate to Severe Generalized Anxiety → Therapy + Duloxetine → Poor/No Response → Child/Adolescent Psychiatrist
Mild to Moderate Obsessive Compulsive Disorder

Moderate to Severe Obsessive Compulsive Disorder

Therapy

Fluoxetine

Fluvoxamine

Child/Adolescent Psychiatrist

Sertraline
Also...

• Depression in adolescent can be the first presentation of Bipolar Disorder – there are no medications FDA approved for Adolescents for Bipolar Depression

• If Adolescent becomes more agitated with antidepressant or suicidal ideation occurs (increases).....probable Bipolar Disorder
Resources and Bibliography
Helpful Resources

• American Academy of Child & Adolescent Psychiatry  www.aacap.org
• Anxiety & Depression Association of America  www.adaa.org
• Bipolar Kids  www.bipolarkids.org
• Children & Adults with ADHD  www.CHADD.org
• National Alliance for the Mentally Ill  www.NAMI.org
• National Suicide Prevention Lifeline  www.suicidepreventionlifeline.org
• Zero Suicide  www.zerosuicide.sprc.org
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• [https://www.teenrehabcenter.org/co-occurring-disorders/phobias/](https://www.teenrehabcenter.org/co-occurring-disorders/phobias/)