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Anxiety in AYA. Practical Advice using CAM (Culture, Apps and Medication)

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Megan D. Jacobs, MD, MSCS, FAAP
Carolyn Lentzsch-Parcells, MD, FAAP
Bethany Ashby, Psy D
Diane Reichmuth, Psy D
Educational Objectives

After attending the workshop participants will

• **Recognize the cultural considerations** in assessing anxiety symptoms among AYA

• **Identify symptoms of anxiety** among the refugee AYA population

• Describe the use of different **medications used** for AYA with anxiety

• **Utilize apps** that would assist AYA in coping with anxiety
Agenda

• Brief Review
• Cultural Considerations
• Cases
• Medications
• Apps
• Case Discussion
Symptoms
Characteristics
Physiological Symptoms

• Muscle tension
• Heart palpitations
• Sweating
• Dizziness
• Shortness of breath
Characteristics
Emotional Symptoms

• Restlessness
• Sense of impending doom
• Fear of dying
• Fear of embarrassment or humiliation
• Fear of something terrible happening.
Classification of Anxiety Disorders
Anxiety Disorders, DSM5
Definition

• A state of intense apprehension, uncertainty, and fear resulting from the anticipation of a threatening event or situation, often to a degree that normal physical and psychological functioning is disrupted

(American Heritage Medical, 2007, p. 38)
Anxiety Disorders
Fear and Anxiety

• Each of the Anxiety Disorders share features of fear and anxiety.

• Fear is the emotional response to real or perceived threat, whereas anxiety is anticipation of future threat

APA, 2013
Anxiety Disorders Classification

• Social Anxiety Disorder (SAD)
• Generalized Anxiety Disorder
• Separation Anxiety Disorder
• Specific Phobia
  • 300.29 (F40.228) Animal
  • 300.29 (F40.248) Situational (e.g. airplanes, elevators, enclosed spaces)
  • 300.29 (F40.298) Other (situations that may lead to choking or vomiting; in children, e.g., loud sounds or costumed characters)
  • 300.29 (F40.228) Natural Environment
  • 300.29 (F40.23x) Blood-injection injury
    • F40.230 Fear of blood
    • F40.231 Fear of injections and transfusions
    • F40.232 Fear of other medical care
    • F40.233 Fear of injury
Anxiety Disorders Classification

- Panic Disorder
- Selective Mutism
- Anxiety Disorder, Other Specified
- Anxiety Disorder, Unspecified
- Anxiety Disorder, Due to General Medical Condition

(APA, 2013)
Mental Health Problems for Refugee Populations

- High rates of psychological disturbance

- Theorists:
  - Multiple events
  - Multiple contexts
  - Persist over time.

- Psychopathology
  - Multiple Dimensions
  - Beyond posttraumatic.

M Porter, N Haslam, Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis - JamaNetwork, 2005
Mental Health Problems for Refugee Populations

• Diverse stressors accumulate
  • Preflight
  • Flight
  • Exile
  • Resettlement/repatriation periods.

• Historic Focus: War
  • Broader context required

• Post Migration Stress
  • Marginalization
  • Socioeconomic disadvantage
  • Acculturation
  • Loss of social support
  • “cultural bereavement

• Persisting forms of adversity

M Porter, N Haslam, Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis
- JamaNetwork, 2005
Other Factors Related to Migration That Impact Mental Health

Table 1:

<table>
<thead>
<tr>
<th>Premigration</th>
<th>Migration</th>
<th>Postmigration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult</strong></td>
<td><strong>Migration</strong></td>
<td><strong>Postmigration</strong></td>
</tr>
<tr>
<td><strong>Economic, educational and occupational status in country of origin</strong></td>
<td>Trajectory (route, duration)</td>
<td>Uncertainty about immigration or refugee status</td>
</tr>
<tr>
<td><strong>Disruption of social support, roles and network</strong></td>
<td>Exposure to harsh living conditions (e.g., refugee camps)</td>
<td>Unemployment or underemployment</td>
</tr>
<tr>
<td><strong>Trauma (type, severity, perceived level of threat, number of episodes)</strong></td>
<td>Exposure to violence</td>
<td>Loss of social status</td>
</tr>
<tr>
<td><strong>Political involvement (commitment to a cause)</strong></td>
<td>Disruption of family and community networks</td>
<td>Loss of family and community social supports</td>
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<tr>
<td></td>
<td>Uncertainty about outcome of migration</td>
<td>Concern about family members left behind and possibility for reunification</td>
</tr>
<tr>
<td></td>
<td>Difficulties in language learning, acculturation and adaptation (e.g., change in sex roles)</td>
<td></td>
</tr>
<tr>
<td>Child</td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age and developmental stage at migration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separation from caregiver</td>
<td>Stresses related to family’s adaptation</td>
<td></td>
</tr>
<tr>
<td><strong>Disruption of education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to violence</td>
<td>Difficulties with education in new language</td>
<td></td>
</tr>
<tr>
<td><strong>Separation from extended family and peer networks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to harsh living conditions (e.g., refugee camps)</td>
<td>Acculturation (e.g., ethnic and religious identity; sex role conflicts; intergenerational conflict within family)</td>
<td></td>
</tr>
<tr>
<td>Poor nutrition</td>
<td>Discrimination and social exclusion (at school or with peers)</td>
<td></td>
</tr>
<tr>
<td>Uncertainty about future</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laurence J. Kirmayer, MD, Lavanya Narasiah, MD MSc, Marie Munoz, MD, Meb Rashid, MD, Andrew G. Ryder, PhD, Jaswant Guzder, MD, Ghayda Hassan, PhD, Cécile Rousseau, MD MSc, and Kevin Pottie, MD MCISc, for the Canadian Collaboration for Immigrant and Refugee Health (CCIRH), Common mental health problems in immigrants and refugees: general approach in primary care, CMAJ, Sept, 2011
Common Mental Health Problems in Refugee Populations

- Post Traumatic Stress Disorder
- Depression and Mood Disorders
- Anxiety
- Substance Use
- Eating Disorders
- Psychosis

- DSM V-Codes
- Abuse/Neglect of Child
- Parent-Child Relational Problems
- Poverty
- Housing
Medication Management for Adolescent Anxiety

Megan Jacobs, MD
Assistant Professor of Pediatrics
Division of Adolescent Health
Oregon Health & Science University
Objectives

• Review evidence-based medication application for adolescent anxiety
• Simplify anxiety medication treatment steps
• Compose key elements of anxiety medication counseling
Diagnosis

Anxiety?

Safety
- Neglect/Abuse?
- Drug abuse?
- Medical cause?
- Suicidal?

Comorbidities?
- Depression
- PTSD
- ADHD
- Other anxiety disorders

Diagnosis

Tools: DSM-5  SCARED  GAD-7
- Spence Anxiety Scale for Children
- Obsessions/compulsions - consider OCD
- Nightmares/flashbacks – consider PTSD

(Hilt, 2017)
Mild Anxiety

• Noticeable, but functional
• Provide Reassurance
• Office or Psychotherapy interventions
  • Correcting distorted thoughts
  • Stress reduction (modify school day or work-load)
  • Relaxation techniques
  • Validate somatic symptoms

(Hilt, 2017)
Moderate/Severe Anxiety

• Functional impairment from persistent fear or worry
  • 6 months or more

1. Psychotherapy: exposure-based cognitive behavior therapy

2. Psychopharmacology
   1. SSRI - genetics/shared decision-making
      - 6-8 weeks at increased dosing prior to “treatment failure”
   2. SSRI
   3. Change class or add 2\textsuperscript{nd} medication
      - Can be helpful to get psychiatry assistance/consult by 3\textsuperscript{rd} medication “failure”

Ballenger, 2000
## Anxiety medications

<table>
<thead>
<tr>
<th>Class</th>
<th>Name</th>
<th>Starting dose</th>
<th>Incremental increase at 4 weeks</th>
<th>Max dose</th>
<th>Evidence</th>
<th>Helpful comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSRI</td>
<td>Fluoxetine</td>
<td>10-20 mg</td>
<td>10-20 mg</td>
<td>40 mg/day</td>
<td>OCD &gt;7yr</td>
<td>Long 1/2 life, Drug interactions, if OD→ EKG</td>
</tr>
<tr>
<td></td>
<td>Sertraline</td>
<td>25, 50, 100mg</td>
<td>25 mg</td>
<td>200 mg/day</td>
<td>OCD &gt;6yr</td>
<td>Rarely lethal in OD; Transient GI/agitation</td>
</tr>
<tr>
<td></td>
<td>Citalopram</td>
<td>10 mg</td>
<td>5-10mg</td>
<td>60 mg/day</td>
<td>RCT anxiety benefit in kids</td>
<td>$$;$; few drug interactions</td>
</tr>
<tr>
<td></td>
<td>Escitalopram</td>
<td>10 mg</td>
<td>10 mg</td>
<td>40 mg/day</td>
<td>&gt;11 yrs for MDD</td>
<td>$$;$; faster onset, better tolerated</td>
</tr>
<tr>
<td></td>
<td>Fluvoxamine</td>
<td>25 mg</td>
<td>50 mg</td>
<td>300 mg/day</td>
<td>OCD &gt;8 yr</td>
<td>More side effects, more drug interactions</td>
</tr>
<tr>
<td>SNRI</td>
<td>Duloxetine</td>
<td>30 mg</td>
<td>10-30 mg</td>
<td>120 mg/day</td>
<td>7-17 yr, FDA approved for GAD</td>
<td>increase BP; helpful if chronic pain/fibromyalgia</td>
</tr>
<tr>
<td>Tetracyclic</td>
<td>Mirtazapine</td>
<td>7.5 mg qhs</td>
<td>7.5-15 mg</td>
<td>45 mg qhs</td>
<td>8-17 yr; off-label use small pilot benefit for social phobias</td>
<td>3rd/4th line; very sedating at lowest dose; sig. side effects</td>
</tr>
</tbody>
</table>

(Hilt, 2017)(Patel, 2018)
## Adjunctive medications

<table>
<thead>
<tr>
<th>Class</th>
<th>Name</th>
<th>Starting dose</th>
<th>Max dose</th>
<th>Evidence</th>
<th>Helpful comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunctive</td>
<td>Azapirone</td>
<td>5 mg BID</td>
<td>15 mg BID</td>
<td>Not FDA approved in children</td>
<td>First-pass metab; Serotonin 1A partial agonist. Alone/adjunct. Least sedating</td>
</tr>
<tr>
<td>Anti-histamine</td>
<td>Hydroxyzine</td>
<td>25mg q6prn</td>
<td>100 mg/day</td>
<td>Insufficient for youth. Benefit in “acute hysteria”</td>
<td>Liquid or tablet Drowsy side effect</td>
</tr>
<tr>
<td>Beta-adrenergic receptor antagonist</td>
<td>Propranolol</td>
<td>10 mg/day</td>
<td>20 mg BID (target dose)</td>
<td>Insufficient for adolescents; + Adult performance anxiety tx</td>
<td>First pass metab; decreases autonomic tone. If discontinuing should taper – rebound HTN</td>
</tr>
<tr>
<td>Benzodiazepine</td>
<td>Diazepam</td>
<td>0.04mg/kg TID</td>
<td>0.27mg/kg TID</td>
<td>FDA approved dosing for GAD in children and teens</td>
<td>Rapid onset; Sedation, amnesia, paradoxical response; risk of abuse/dependence</td>
</tr>
<tr>
<td></td>
<td>Chlordiazepoxide</td>
<td>5mg BID-QID</td>
<td>10mg TID</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oxazepam</td>
<td>10mg QID</td>
<td>30mg QID</td>
<td></td>
<td></td>
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</tbody>
</table>

(Hilt, 2017)(Patel, 2018)
Counseling Highlights

• Review all possible side effects: nausea, headache, sleeping problems, lower libido, agitation

• Safety Assessment
  • Med caution in those with history of bipolar, active SI, or with hallucinations
  • Access to lethal means? gun/weapon/medication storage & oversight

• Required follow up: same screening tool at each visit
  • 1 month for start/dosage adjustment
  • 3 months for stable dosage
Clear expectations

• May start to notice a benefit in 2-6 weeks
• Will likely need to increase dose (lowest that’s most helpful)
• Commit to 6-12 months of medication once at beneficial dose
• If odd behavior/side effects MUST tell adult or call office
• Not a “magic pill” - does NOT change personality
• First medication may not be the best one
• Medication is another tool in “coping skill toolbox”
Medication Practice Questions
Which of the following medications are FDA approved for generalized anxiety disorder in children and adolescents:

- Duloxetine
- Escitalopram
- Sertraline
- Fluvoxamine IR
Robert, an 18-year-old, returns to the office stating that the sertraline he started 6 weeks ago has not been working to help his anxiety. He has generalized anxiety disorder with panic attacks. He would like to try a different medication. From the options below, choose the best next step for Robert’s treatment plan:

- Wean off of sertraline by 25% per week, then start citalopram 20mg per day.
- Verify Robert’s current dose of sertraline
- Wean off of sertraline by 25% per week, then start fluoxetine 10 mg per day
- Stop sertraline and wait 4 weeks to restart any new medications
Which medication for anxiety is best described by the following characteristics: This medication is FDA approved for generalized anxiety disorder in youth 7-17 years old. It is not considered a first line drug of choice for anxiety treatment in children and teens and should not be prescribed to someone with baseline hypertension

- Sertraline
- Hydroxyzine
- Duloxetine
- Alprazolam
Medication Summary

• Consider adding meds in moderate/severe anxiety
• SSRI → SSRI → SNRI or Tetracyclic → refer to psychiatrist for 2nd med
• Fluoxetine & Sertraline are most well known
  • Fluoxetine – avoid in cardiac abnormalities, forgiving if forget to take
  • Sertraline – almost guaranteed transient nausea/headaches, low interactions
    • If forget on higher dose, will have “flu-like” withdrawal symptoms
• Duloxetine: FDA approved 7-17yr for GAD, monitor blood pressure
• Adjunctive short-acting agents should not be used long-term
Case Studies
Case Studies

• You have 4 minutes
• Each group has a different case
• What is the next step in the treatment of this patient?
  • Meds?
  • CBT?
  • Observation?
  • Ref to specialist?
• Please provide rationale
You are working in a tertiary care academic adolescent health clinic. Your patient, GC is a 15 year old female who is referred by ED to your adolescent medicine clinic. She has had 3 visits to ED in one week, for dizziness, chest tightness, shortness of breath and diagnosed with anxiety. She has a history of cutting and has 2 previous suicide attempts, in the past year, involving overdosing on medications, and cutting. Patient is not attending school and has a history of truancy. She denies a history of physical or sexual abuse. Patient reports trying marijuana a few times. Denies all other substance use. Patient reports having no friends, and is socially isolated.

Patient resides with parents, who are married, and older brother, who also has identified mental health problems. High conflict between parents, and mom recently turned dad into the police for stealing from his company, and father did 6 months in jail, and must pay $200,000 in restitution. They currently have a lien against their property, and are wanting to file for bankruptcy.

What is the next step in the treatment of this patient?

• Meds?
• CBT?
• Observation?
• Ref to specialist?
You work in a community health care facility in the Teen Clinic. Your patient CT is a 14-year-old male, presenting with chronic headaches, gastro-intestinal complaints, sleep disturbance, dizziness. Patient has had a GI medical work-up, which is negative. He is failing most classes, and has started to skip classes, but has a history of doing well academically previously. He mentioned that he is using marijuana several times weekly, to help him cope with “stuff”. Your patient denies any prior mental health issues and denies current SI. CT identifies as bi-sexual, and currently in a relationship with a female, for the past 2 months. He lives back and forth between parents, who are divorced, with joint custody. Patient felt it was a high conflict divorce. His mother struggles with depression, and uncle on paternal side of family committed suicide.

What is the next step in the treatment of this patient?

- Meds?
- CBT?
- Observation?
- Ref to specialist?
Patient is a 14-year-old Latino male who presents to your clinic with heart palpitations and shortness of breath. No history of asthma. Patient lives with his mother and four younger siblings. Father was deported last year and sent back to Honduras. Patient has limited contact with him by phone. Mother is undocumented. Patient and siblings are citizens. The patient does well academically and has trouble sleeping prior to exams and spends hours each night making sure his homework is completed correctly. Patient denies any substance use or previous mental health issues and denies suicidal ideation. Younger sibling attempted suicide after father’s deportation. Mother describes anxiety related to safety issues of her children. Patient identifies as heterosexual. Not in a relationship and not sexually active.

What is the next step in the treatment of this patient?

• Meds?
• CBT?
• Observation?
• Ref to specialist?
Case Debrief
There’s an App for that...
Mobile Apps for Stress & Anxiety

• There are thousands

• Based on modalities known to reduce stress and/or anxiety
  • Mindfulness and Meditation
  • Relaxation
  • CBT
Mobile Apps for Stress & Anxiety

• Multiple Formats
  • Digital training or self directed
  • Journaling/symptom trackers
• Activities
• Peer support
• Direct interaction with a Mental Health provider
Pros and Cons

• Pros:
  • Accessibility
  • Cost
  • Efficacy?

• Cons:
  • Efficacy?
  • Risk
  • Cost
The Data

• Research overall is sparse and lacking

• Growing body of literature suggesting that app based digital instruction is effective for teaching mindfulness

• Very few individual apps have been rigorously studied
Calm

• Topics: Stress, Anxiety, Focus, Sleep, Gratitude, Mindful eating, etc.

• Modalities:
  • > 100 guided meditations
  • Sleep Stories
  • Music tracks
  • Calm Master Class
  • Stretches
Calm

• Ability set reminders and customize options
• Guided Meditations for Children and Adolescents by age
  • 7-10 yrs, 11-13 yrs, 14-17 yrs, College Students
  • Meditations are 6-13 min

• Cost: $69.99/yr ($5.83/month) after 7 day free trial

• Studies: None that we are aware of
HEADSPACE

• Topics: Stress, Anxiety, Focus, Sleep, Gratitude, Mindful eating, Happiness, Performance, etc.

• Modalities:
  • > 100 guided mindfulness exercises
  • Single sessions and Packs
  • Semi-guided and unguided sessions
  • Educational animations and articles
HEADSPACE

• Ability set reminders, customize options, Apple watch

• Guided Meditations for Children and Adolescents by age
  • > 5yrs, 6-8 yrs, 9-12 yrs, Students
  • Length varies by age, multiple options given

• Cost: Basic pack is Free
  • $7.99/month (annual sub), $12.99/month, $19.99/month family plan
HEADSPACE

Studies: 16 published studies
Angst: The Panic Attack

• A VR experience which demonstrates a teen having a panic attack and techniques used to overcome the panic attack. Based on the documentary Angst.

  Happify

• **Cost:** Free
Stop, Breathe, & Think

Meditation and mindfulness that starts with asking the user to “check in” with themselves physically and emotionally before starting, then recommends specific exercises.

- **Topics:** Stress, Anxiety, Sleep, Focus, Kindness, Depression, etc
- **Modalities:** guided meditation, yoga, acupressure, journaling, regular check-ins
- **Guided Meditation for Children and Adolescents by age:** for tweens, teens, and college students
- **Cost:** Free – foundational meditations, Subscription - $9.99/month, $58.99/yr
- **Other Features:** Able to choose voices.
Happify

Aims to build emotional health and resilience through Tracks which are tailored to the user after obtaining baseline data. Developed by mental health professionals.

- **Modalities:** tasks and games based on positive psychology, mindfulness, and CBT, self-assessment
- **Guided Meditations for Children and Adolescents by age:** no, but has tracks for parenting
- **Cost:** Free tracks, Subscription - $139.99/yr, $14.99/month
- **Other Features:** Option to participate in online community, each activity has accompanying scientific explanation
References

• Anxiety and Depression Association of America (2013).
References


Questions/Comments?