Addressing sleep concerns with therapeutic interventions and medication management

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ROGERS Behavioral Health

1

Disclosures

Mitzi Kramer, MD, FAPA, and Sonia Izmirian, PhD, have each declared that they do not, nor does their family have, any financial relationship in any amount occurring in the last 12 months with a commercial interest whose products or services are discussed in the presentation.

The presenters have each declared that they do not have any relevant non-financial relationships. Additionally, all planners involved do not have any financial relationships.

2

Learning objectives

Upon completion of the instructional program, participants should be able to:

1. List at least two sleep strategies to recommend or use with patients who have sleep concerns.
2. Recognize at least three pharmacotherapy approaches which could be beneficial in treating patients with sleep concerns.

3

What we'll cover in this webinar

Defining insomnia and nightmare disorder, and reviewing sleep hygiene strategies
- *DSM-5 TR* criteria for insomnia and nightmare disorder
- Sleep hygiene strategies for adults and children
- Application to pediatric population

Strategies to address sleep issues
- Cognitive behavioral therapy for insomnia (CBT-I) and imagery rehearsal therapy
- Considerations for implementation
- Prevalence rates for sleep disorders among LGBTQ population

Pharmacotherapy strategies for treatment of insomnia
- Newer medications with a novel mechanism of action to address various sleep disorders

Moderated Q&A

4

Defining insomnia and nightmare disorder, and reviewing sleep hygiene strategies

Q&A

Please use the Q&A feature to send your questions to the moderator.

5

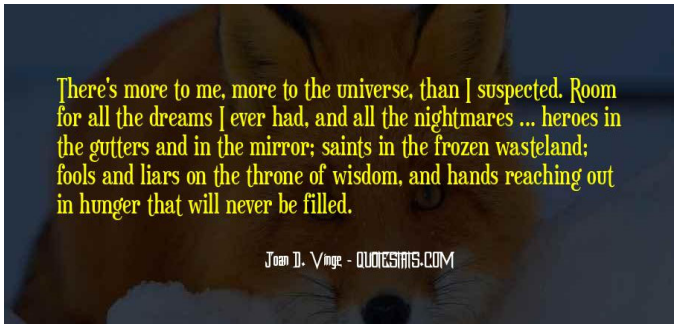
DSM-5 TR criteria: Insomnia Disorder

- A predominant complaint of dissatisfaction with sleep quantity or quality, associated with one (or more) of the following symptoms:
  - **Difficulty initiating sleep. (In children, this may manifest as difficulty initiating sleep without caregiver intervention.)**
  - **Difficulty maintaining sleep, characterized by frequent awakenings or problems returning to sleep after awakenings. (In children, this may manifest as difficulty returning to sleep without caregiver intervention.)**
  - **Early-morning awakening with inability to return to sleep.**
- The sleep disturbance **causes clinically significant distress or impairment** in social, occupational, educational, academic, behavioral, or other important areas of functioning.
- The sleep difficulty occurs **at least 3 nights per week**
- The sleep difficulty is present for **at least 3 months.**
- The sleep difficulty occurs despite **adequate opportunity for sleep**.

(American Psychiatric Association, 2022)

6

Nightmare Disorder



7

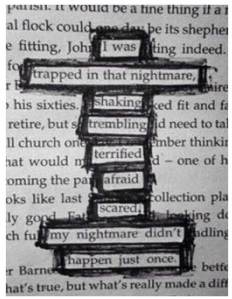
DSM-5 TR criteria: Nightmare disorder

- Repeated occurrences of extended, extremely dysphoric, and well-remembered dreams that usually involve efforts to avoid threats to survival, security, or physical integrity and that generally occur during the second half of the major sleep episode.
- On awakening from the dysphoric dreams, the individual rapidly becomes oriented and alert and conscious of surroundings
- The sleep disturbance causes clinically significant daytime distress or impairment in social, occupational, or other important areas of functioning.
- The nightmare symptoms are not attributable to the physiological effects of a substance and are also frequently accompanied by disrupted sleep and affective complaints
- Coexisting mental disorders and medical conditions do not adequately explain the predominant complaint of dysphoric dreams.
- Falls under the category of parasomnias.

(American Psychiatric Association, 2022)

8

Nightmare disorder



- Nightmares are often associated with other psychiatric comorbidities
  - Anxiety
  - Depression
  - Schizophrenia
  - Post Traumatic Stress Disorder
  - Suicidal Ideation and SIB
  - Substance Abuse
  - Borderline Personality Disorder
- More common when family members have nightmares or parasomnias

(Van Schagen, et al., 2015; American Psychiatric Association, 2022)

9

Nightmare Disorder Specifiers

- **Acute –** less than one month
- **Subacute –** greater than one month, less than six months
- **Persistent –** greater than six months

- **Mild –** less than one episode per week
- **Moderate –** one or more episodes per week, but not nightly
- **Severe –** nightly

(American Psychiatric Association, 2022)

10

Nightmare Disorder versus PTSD nightmares

(De Dassel, et al., 2015; PTSD.va.gov)

- Idiopathic nightmares associated with Nightmare Disorder do not necessarily reflect traumatic events and occur without other clinical signs of psychopathology
- PTSD nightmares are replications of a traumatic event or contain trauma related emotions or content symbolic of trauma.
- 80% of PTSD patients report nightmares which are considered to be a component of the re-experiencing symptoms cluster
- PTSD nightmares cause more arousal and limb movements, nocturnal awakenings, more hopelessness. Can occur at all stages of sleep causing difficulty with sleep latency.
- Contrary to night terrors there are no confusional arousals, incomplete awakenings or difficulties being comforted

11

Sleep hygiene strategies

1. Stick to a schedule for waking and sleeping
2. Establish a bedtime routine
3. Don't eat or drink a lot before bed
4. Avoid/limit caffeine, nicotine, alcohol, and cannabis
5. Exercise regularly in mornings or early afternoon
6. Keep your room cool, comfortable, and safe
7. Sleep primarily at night

(Gehrman, 2021; Manber, et al., 2014; Rathus & Miller, 2015)

12

Sleep hygiene strategies

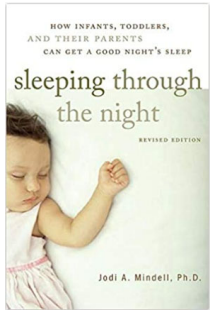
8. Keep it dark and quiet
9. NO screens
10. Use your bed only for sleep/intimate relationships
11. Take a bath/shower at night.
12. Don't depend on sleeping pills/medication
13. Don't catastrophize
14. Turn the clock around or remove them

(Gehrman, 2021; Manber, et al., 2014; Rathus & Miller, 2015)

13

Application to pediatric population

- Napping
  - Babies: Good (Mindell, 2005)
  - Children/Teenagers: Bad
- Phone use
- Emotion regulation in young adults positively associated with poor/moderate sleep in a non-psychiatric sample (Fisher, et al., 2022)
- Young children with more overall sleep disruption had increased risk of suicidal thoughts across childhood and adolescence (Hoyniak, et al., 2022)
  - Especially children who got less sleep at night, were more resistant at bedtime, had late bedtimes, and more difficulty sleeping alone



14

Strategies to address sleep issues

Q&A Please use the Q&A feature to send your questions to the moderator.

15

Cognitive behavioral therapy for insomnia (CBT-I)

- Fairly short (5-6 sessions) evidence-based practice
- A lot of research support for CBT-I
  - CBT-I in a group setting significantly decreased insomnia and depression symptoms, and slightly decreased anxiety symptoms (Cassel, et al., 2022)
  - Older adults with insomnia (but without depression) decreased their insomnia and prevented depressive episodes by more than 50% compared to treatments that focused on sleep education (Irwin, et al., 2021)
  - A CBT-I online program improved Black women's sleep (above and beyond sleep education), and there was a higher completion of the program if it was culturally tailored (Zhou, et al., 2022)
  - Research in adolescents is also growing
    - Improved sleep, anxiety, and depression symptoms after implementing CBT-I (Aslund, et al., 2020)

16

CBT-I: Intake and measures

- Prior to implementing sleep interventions, we gather information for the case conceptualization
  - Intake form
  - Sleep diary every day (reviewed every session)
    - CBT-i Coach (Hoffman, et al., 2022)
    - Paper chart
- Examples of measures
  - Insomnia Severity Index (Morin, et al., 2011)
  - Pittsburgh Sleep Quality Index (Buysee, et al., 1989)

(Gehrman, 2021; Manber et al., 2014)

17

CBT-I: Basic principles

Low arousal

+

Correct Circadian Placement

+

Strong Sleep Drive

=

Good sleep

(Gehrman, 2021; Manber, et al., 2014)

18

CBT-I: Stimulus control

Insomnia = disorder of conditioned arousal

- To "unlearn" this, the patient needs to
  - Only be in bed when they are sleepy (NOT tired)
  - Get out of bed after 15-20 minutes of trying
    - Use other strategies or find activities to do to tire you or address any concerns
    - No TV or phone

(Gehrman, 2021; Manber, et al., 2014)

19

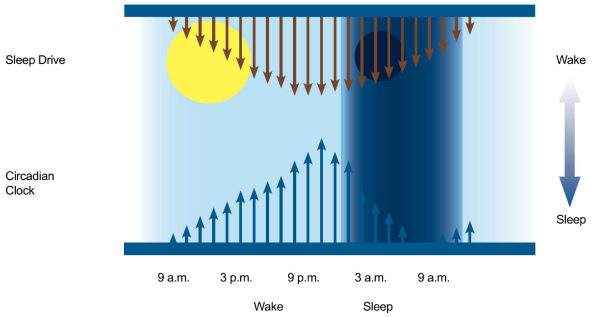
CBT-I: Circadian rhythm

- Strengthen it with:
  - Waking up the same time every day
  - Timing and amount of light exposure you get
  - Regularity of other activities (e.g., eating, exercise)

(Gehrman, 2021; Manber, et al., 2014)

20

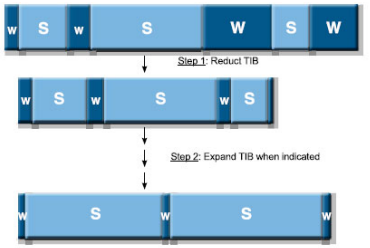
CBT-I: Circadian rhythm and sleep drive



(Gehrman, 2021; Manber, et al., 2014, p.99)

21

CBT-I: Sleep restriction therapy



TIB: Time in bed

(Gehrman, 2021; Manber, et al., 2014, p. 110)

22

CBT-I: Sleep efficiency

Sleep efficiency (SE) = Total sleep time / Total time in bed (TIB)

- Goal: 85%

- Step 1: decrease time in bed to be ~ current average total sleep time (i.e., at least 5 hours+)

- Step 2: Slowly increase time in bed
  - If SE is > or = to 85%, can increase TIB by ~15 min if moderately sleepy during the day and ~30 min if very sleepy during the day

(Gehrman, 2021; Manber, et al., 2014)

23

CBT-I: Guiding your sessions

Across first few sessions:

1. Wake up at ___ every day (SC/SRT)
2. Go to bed when you are sleepy, but not before ____ (SC/SRT)
3. Get up when you can't sleep (SC)
4. Use the bed only for sleeping (SC)
5. Avoid daytime napping (SC)
6. Create a "buffer zone" (SC)
7. Don't worry, plan, etc. in bed (SC)

SC = stimulus control
SRT = sleep restriction therapy

(Gehrman, 2021; Manber, et al., 2014, p. 107)

24

CBT-I: Guiding your sessions

At the beginning of each session:

- Get their data for the week
- Calculate their Sleep Efficiency
- Determine what they are adjusting in the strategies
  - Increase/decrease TIB?
  - Introduce other therapeutic strategies (e.g., CBT, DBT, ACT)
  - Introduce counter-arousal strategies (e.g., relaxation strategies)
  - Review sleep hygiene strategies if needed

(Gehrman, 2021; Manber, et al., 2014)

25

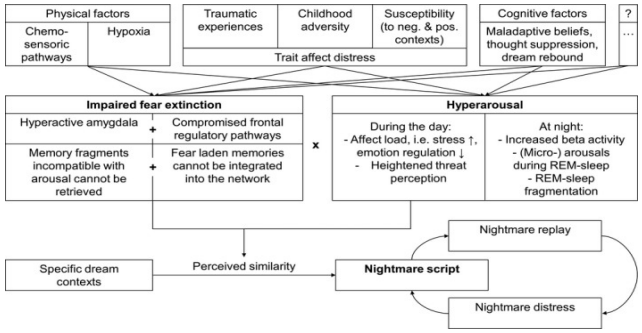
Imagery rehearsal therapy for Nightmare Disorder

- CBT evidence-based approach focused on altering nightmares and gaining control over distressing images.
- Primary outcome measures:
  - Decrease frequency of nightmares (Nightmare Frequency Questionnaire)
  - Decrease intensity of anxiety/distress produced by nightmares (i.e., reduction in Subjective Units of Distress (SUD on Nightmare Distress Questionnaire).
- Strongest benefit was reduction in nightmares across all populations (those with and without PTSD diagnosis)
- Robust clinically significant reduction in nightmare anxiety in patients without PTSD induced nightmares
- Moderate reduction in anxiety in PTSD population and decreased PTSD symptoms severity based on Clinician Administered PTSD scale (CAPS-5)

(Gieselmann, et al., 2019; Thunker, et al., 2012)

26

Integrative model of nightmare etiology



(Gieselmann, et al., 2019)

27

Nightmare etiology

According to Solms' neurocognitive theory of dream generation, dreams are manifested in the forebrain independent of REM state.

Hyperarousal during the day is accumulated, then manifested in dreams / nightmares at night.

Individuals with nightmare disorder activate arousing and frightening memory fragments at night which reinforces fear response

Hyperactive amygdala combines with compromised frontal pathways (Medial Prefrontal Cortex) to create higher affect distress and impaired fear extinction

(Gieselmann, et al., 2019)

28

Nightmare etiology

- Several factors facilitate hyperarousal and impaired fear extinction in patients with nightmare disorder
- Traumatic experiences and childhood adversity lead to heightened threat perception
- Trait susceptibility-nightmare sufferers are more sensitive to both negative and positive emotional stimuli
- Maladaptive cognitive factors-suppressing negative unwanted thoughts increase likelihood that thoughts will reoccur in dreams
- Psychological factors-severe sleep fragmentation caused by OSA

(Gieselmann, et al., 2019)

29

Imagery rehearsal therapy

- Targets the chronic repetitious nature of nightmares.
- Recommended as level A treatment for nightmare disorder by Oxford Centre for Evidence Based Medicine and AASM guidelines
  - Write out the narrative as close to the event as possible.
  - Rewrite the nightmare on a separate piece of paper, changing the arc and theme of the story so that it has either a neutral or a positive content in which your patient is empowered and taking control.
  - Rehearse the rescripted dream scenario 20 minutes a day, several times a day in order to displace the unwanted content when the dream does recur.
  - Repeat the procedure, experimenting with rewrites if you don't have success on the first attempt(s)

(Krakow & Zadra, 2006; Morgenthaler, et al., 2018)

30

Imagery rehearsal therapy

- Acts to inhibit the original nightmare, providing a cognitive shift that empirically refutes the original premise of the nightmare.
- Demonstrated clinically meaningful and significant decrease in nightmare frequency with long term follow up
- Effective in the management of both PTSD associated nightmares and idiopathic nightmares
- Well tolerated treatment

(Schwartz, et al., 2022)

31

Pharmacological treatment for nightmares

- Alpha blockers (Prazosin, Doxazosin, Clonidine) may be used as adjunct therapy according to AASM guidelines. There's evidence that treatment with alpha antagonists didn't yield any real improvements in recent large scale multicenter trials as well as evidence that it's more effective than once thought in reducing nightmare frequency and improving sleep quality Due to this conflicting data it's not considered to be a level A treatment like IRT.
- Other off label options include Topiramate, Gabapentin, Cyproheptadine, and TCA's but none have FDA indication nor are they considered level A treatment by AASM criteria

(Yücel, et al., 2019; Raskind, et al., 2018)

32

Considerations for implementation: CBT-I

- Help patients with
  - Finding activities to do when they are awake to keep them up
  - Finding activities to do if they can't fall asleep and need to get out of bed at night
  - Setting aside time to think, worry, problem-solve, and plan
- Shift workers
- People who drive long distances

(Gehrman, 2021; Manber, et al., 2014)

33

Considerations for implementation: IRT

- Adopt a flexible approach based on patient's needs
- Conceptualize as two components
  - Nightmares are a learned sleep disorder
  - Nightmares are associated with damaged imagery system
- Four sessions total, approx. 8-9 hours of therapy
  - First two sessions-improve insight into recognizing nightmares as learned insomnia
  - Final two sessions-teach concepts of IRT, recognizing connection between daytime thoughts and nightmares
  - Don't discount patients' perception of triggering events that they believe are the root cause of nightmares

(Krakow, et al., 2000)

34

Prevalence rates: Sleep disorders among LGBTQ population

- In a large cross-sectional analysis of psychiatric diagnoses in clinical care settings, approximately 58% of transgender patients have at least one DSM-5 diagnoses compared with 13.6% of cisgender patients with Major Depression and Generalized anxiety being the most common diagnoses.
- Disparities in sleep problems between LGBTQ and general population are well documented
  - Shorter sleep duration (<5 hours sleep compared with heterosexual population)
  - Snoring
  - Increased sleep latency (32% higher prevalence of trouble falling asleep)
  - Poorer overall sleep quality (22% higher prevalence of waking up feeling unrested)

(Wanta, et al., 2019; Chum, et al., 2021)

35

Prevalence rates of sleep disorders among LGBTQ population

- Possible determinants:
  - Rejection by family of origin leading to increased overall anxiety
  - Higher rates of discrimination
  - Higher rates of violence (leading to higher prevalence of PTSD and PTSD associated nightmares)
- Improved social support in childhood among transgender persons may be a critical point of intervention for the prevention of significant mental illness in adulthood

(Wanta, et al., 2019)

36

Pharmacotherapy strategies for treatment of insomnia

Q&A **Please use the Q&A feature to send your questions to the moderator.**

37

Clinical practice guidelines

- A strong recommendation from AASM is one clinicians should follow, a weak recommendation reflects a lower degree of certainty
- No pharmacotherapy agents have a strong recommendation from AASM
  - The "z" drugs (Zaleplon, Zolpidem, Eszopiclone) have weak indications (versus no treatment) for sleep onset and sleep maintenance, as does Temazepam
  - Doxepin has a weak indication for sleep maintenance only
  - Triazolam and Ramelteon have weak indications for sleep onset only
  - AASM suggests clinicians not use Trazodone, Diphenhydramine, Melatonin, Valerian or Tryptophan due to lack of evidence for efficacy

(Sateia, et al., 2017)

38

Current guidelines
American Academy of Sleep Medicine

Treatment	Recommendation	Direction and Strength of Recommendation	Quality of Evidence	Benefits and Harms Assessment	Patients' Values and Preferences Assessment
Orexin receptor agonists					
Suvorexant This recommendation is based on trials of 10, 15/20, and 20 mg doses of suvorexant.	We suggest that clinicians use suvorexant as a treatment for sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
BZD receptor agonists					
Eszopiclone This recommendation is based on trials of 2 mg and 3 mg doses of eszopiclone.	We suggest that clinicians use eszopiclone as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Very low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Zaleplon This recommendation is based on trials of 10 mg doses of zaleplon.	We suggest that clinicians use zaleplon as a treatment for sleep onset insomnia (versus no treatment) in adults.	WEAK	Low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Zolpidem This recommendation is based on trials of 10 mg doses of zolpidem.	We suggest that clinicians use zolpidem as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Very low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Benzodiazepines					
Triazolam This recommendation is based on trials of 0.25 mg doses of triazolam.	We suggest that clinicians use triazolam as a treatment for sleep onset insomnia (versus no treatment) in adults.	WEAK	High	Benefits approx equal to harms	The majority of patients would use this treatment (over no treatment), but many would not.
Temazepam This recommendation is based on trials of 15 mg doses of temazepam.	We suggest that clinicians use temazepam as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Moderate	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Melatonin agonists					
Ramelteon This recommendation is based on trials of 8 mg doses of ramelteon.	We suggest that clinicians use ramelteon as a treatment for sleep onset insomnia (versus no treatment) in adults.	WEAK	Very low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Heterocyclics					
Doxepin This recommendation is based on trials of 3 mg and 6 mg doses of doxepin.	We suggest that clinicians use doxepin as a treatment for sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Low	Benefits outweigh harms	The majority of patients would use this treatment (over no treatment), but many would not.
Trazodone This recommendation is based on trials of 50 mg doses of trazodone.	We suggest that clinicians not use trazodone as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Moderate	Harms outweigh benefits	The majority of patients would use this treatment (over no treatment), but many would not.
Anticonvulsants					
Tiagabine This recommendation is based on trials of 4 mg doses of tiagabine.	We suggest that clinicians not use tiagabine as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Very low	Harms outweigh benefits	The majority of patients would not use this treatment (over no treatment), but many would.
Over-the-counter preparations					
Diphenhydramine This recommendation is based on trials of 50 mg doses of diphenhydramine.	We suggest that clinicians not use diphenhydramine as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Low	Benefits approx equal to harms	The majority of patients would not use this treatment (over no treatment), but many would.
Melatonin This recommendation is based on trials of 2 mg doses of melatonin.	We suggest that clinicians not use melatonin as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Very low	Benefits approx equal to harms	The majority of patients would use this treatment (over no treatment), but many would not.
L-tryptophan This recommendation is based on trials of 250 mg doses of tryptophan.	We suggest that clinicians not use tryptophan as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults.	WEAK	High	Harms outweigh benefits	The majority of patients would use this treatment (over no treatment), but many would not.
Valerian This recommendation is based on trials of variable dosages of valerian and valerian-hops combination.	We suggest that clinicians not use valerian as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults.	WEAK	Low	Benefits approx equal to harms	The majority of patients would not use this treatment (over no treatment), but many would.

39

Newer pharmacotherapy agents approved by FDA for insomnia: the orexin receptor antagonists

Suvorexant (Belsomra)
Lemborexant (Dayvigo)
Daridorexant (Quviviq)

- Work on the sleep/wake cycle to suppress wakefulness
- A study that came out earlier this month in Journal of Clinical Sleep Medicine indicated that Lemborexant showed both self-reported and objective benefits in treating chronic insomnia.
- There's a discrepancy between FDA approval (which indicates "statistically significant benefits" when compared to placebo in some trials), and AASM guidelines.
- Clinical practice guidelines for combination therapy (hypnotic drug treatment and behavioral therapy) are being investigated

(Khazaie, et al., 2022; Xue, et al., 2021; Juginovic, 2023)

40

Case example

- Age: Mid-30's
- Diagnosis status: Posttraumatic Stress Disorder and Insomnia Disorder
- Disability and physical health status: Able-bodied, overall good physical health
- Religion and spirituality: Unknown
- Ethnicity and race: White
- Sexual orientation: Bisexual
- Socioeconomic status: Middle Class
- Occupation: Nurse
- Indigenous heritage: NA
- National origin: US Citizen
- Gender identity: Female

41

Case example

Other factors:

- Had 2 children who lived with her 50% of the time
- Had ill parents that she took care of

Treatment progress:

- 1) Prolonged Exposure to address trauma
- 2) CBT-I to address sleep
- Tracked her sleep well
- Treatment interfering factors that we addressed:
  - If her partner came over, sleep schedule skewed
  - Her children liked to sleep in her bed
  - Noise from outside her apartment
  - Migraines → couch

42

Time for questions and answers…

- Please use the Q&A button – not the chat – to submit your question
- If we don't get to your question, please feel free to send an email to **webinars@rogersbh.org** and we will follow-up with you

43

Where to get additional information…

Books:

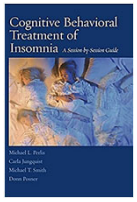
- Cognitive Behavioral Treatment of Insomnia (Perlis et al., 2008)

Trainings:

- Penn State training in CBT-I (https://www.med.upenn.edu/cbti/)
- Psychwire
- PESI
- Introduction to Imagery Rehearsal Therapy Barry Krakow M.D. https://barrykrakowmd.com/product/introduction-to-imagery-rehearsal-therapy/)

Measures:

- Nightmare Frequency Questionnaire, Nightmare Distress Questionnaire, and the Mannheim Dream Questionnaire are available at APA PsychNet Direct website (Psychnet.apa.org)
- Clinician Administered PTSD scale (CAPS-5) available at ptsd.va.gov



44

About the presenters....

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