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The Underestimated, But Crucial Role of Sleep in Mental Health©

Sleep is a Therapy Target

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- ✓ Sleep is essential to better mental health.
- ✓ Mental health problems can cause or be associated with sleep disturbances
- ✓ The sleep-wake cycle sometimes reverses, which is common in depression and other disorders
- ✓ Sleep problems can make one's mental health worse. Mental health problems may make sleep problems worse.

It seems obvious that the mind at rest -- or the mind not resting -- has to have a profound role in mental health. After all, it is during sleep that the brain activates its process for clearing neurotoxic waste, such as beta-amyloid (Xie, et al, 2013). The activating hormone, adrenalin, which is also associated with anxiety, interferes with that process, leading to alertness.

Sleep influences almost every major behavioral and cognitive function.

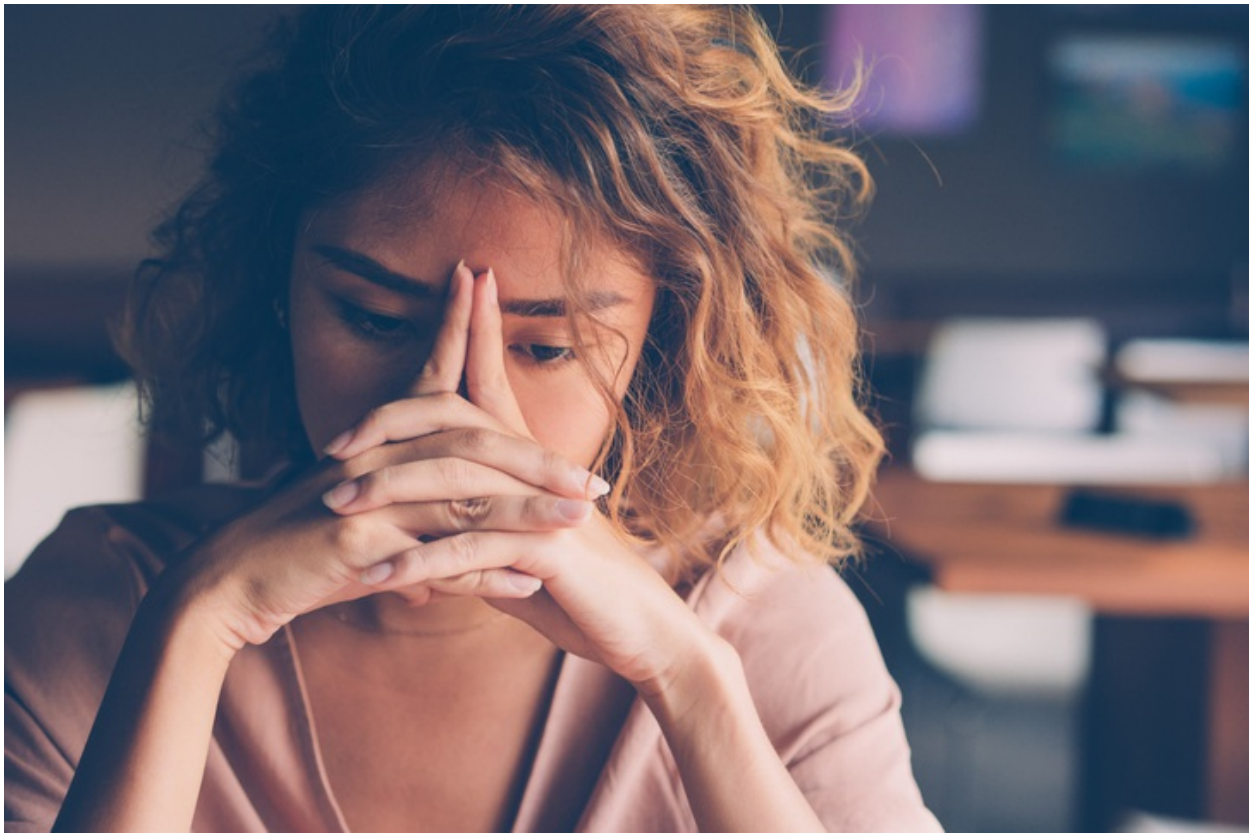
- mood regulation, e.g., irritability
- cognitive function, e.g., quick and clear thinking
- memory, consolidation of new memories, retrieval
- attention
- emotional control
- resilience

Any parent can tell you how a young child's emotional controls deteriorate when the child is tired.

We know that getting chronically and significantly less sleep than your "sleep need" is associated with many of our most common chronic illnesses – hypertension, strokes, heart attacks, obesity, and type 2

diabetes (Prather, 2024). It's also associated with weakened immune functioning, lessened antibody creation response to vaccination (so, get sleep on the days before and after!), and a greater likelihood of respiratory infection after exposure to the virus (Prather & Leung, 2016).

Despite its importance, we underestimate the link between sleep and mental health. In our sleep - depriving culture, the evening news is over at 10:30 and goes into the late shows, with their opening monologues. But jobs often often begin at 7:00AM or 8:00AM, after a commute. That leaves roughly 11:00PM to 5:30AM or 6:00AM – if one has prepared to go right to sleep and falls asleep readily. So, we are set up to get too little sleep. High schools, especially for teens on sports teams, are set up to give teens too little sleep. Our culture underestimates sleep.



A) The Role of Sleep in Mental Health

Sleep is essential for maintaining optimal mental health. Here are some key ways it contributes to psychological well-being:

1. Mood Regulation

Sleep helps stabilize emotions. During REM sleep, the brain processes emotional memories and regulates mood. Insufficient sleep disrupts this process, leading to irritability, heightened emotional

reactivity, and an increased risk of mood disorders. We all recognize that when we are tired, our system is more sensitive. Our self-control is lower.

2. Cognitive Function and Problem Solving

Adequate sleep enhances memory consolidation, creativity, and problem-solving skills. The brain's ability to process information and make decisions is significantly improved after a good night's sleep.

3. Stress Management

Sleep acts as a natural stress reliever. Deep sleep (stage 3) reduces the body's stress hormones and supports recovery from daily stressors. That fosters resilience against future challenges.

4. Neurochemical Balance

Sleep maintains the functioning of neurotransmitters such as serotonin, dopamine, norepinephrine, and GABA, which are crucial for mood regulation and motivation. Chronic sleep deprivation can disrupt this balance, thus increasing susceptibility to mental health issues.

5. Emotional Regulation and Social Interactions

Well-rested individuals are better equipped to navigate social interactions and manage interpersonal conflicts. Sleep deficiency can impair empathy and increase misunderstandings in relationships.

B) The Role of Sleep Problems in Poor Mental Health and Disorders

Chronic sleep problems are both a symptom and a contributing factor in various mental health disorders. Here are some examples of how insufficient or disrupted sleep impacts mental health:

1. Depression

- Sleep disturbances, such as insomnia and hypersomnia or reversed sleep-wake cylce, are common in depression.
- Poor sleep exacerbates symptoms of depression by impairing emotional regulation and increasing feelings of hopelessness.

2. Anxiety Disorders

- Insufficient sleep heightens the activity of the amygdala, the brain's fear center, increasing anxiety and the likelihood of panic attacks or other high anxiety states.
- Chronic sleep deprivation can lead to anticipatory anxiety about bedtime, creating a vicious cycle we can call "Secondary Insomnia," namely, insomnia about having insomnia.
- Morning activities can feel aversive, such as preparing for a setting such as school or work that is associated with social anxiety or generalized anxiety.

3. Bipolar Disorder

- Sleep disruptions are a hallmark of bipolar disorder, often triggering mood episodes. Racing thoughts, a symptom of mania, can interfere with getting to sleep.
- Just as sleep deprivation is a symptom of mania, we think sleep deprivation can also lead to mania, while oversleeping, which is sometimes associated with depression, may also deepen depressive episodes.

4. Post-Traumatic Stress Disorder (PTSD)

- Nightmares and insomnia are prevalent in PTSD. Poor sleep quality can intensify intrusive thoughts and emotional distress, making recovery more challenging.
- Intrusive thoughts can prevent sleep. The thoughts are emotionally arousing, so they involve rapid brain activity which is incompatible with the slow-wave alpha activity that is essential to starting sleep.

5. ADHD and Cognitive Impairments

- Sleep problems in ADHD exacerbate attention, focus, and impulse control difficulties.
- Chronic sleep deprivation mimics symptoms of ADHD in individuals without the disorder.
- People with ADHD often have difficulty waking up in the morning. The 'hyperactive mind', racing thoughts, delayed sleep phase, or irregular circadian rhythms (a dysregulated internal clock) can all be involved. Taking prescribed stimulant medication too late in the day may lead to difficulty falling asleep. Some people with ADHD feel de-activated and sluggish in the morning. Irregular sleep hygiene routines may also be a factor.

6. Substance Use Disorders

- Poor sleep increases vulnerability to substance use as individuals turn to stimulants or sedatives to manage their energy levels.
- Substance use further disrupts sleep, perpetuating a harmful cycle.
- The chemicals themselves can interfere with sleep. High stimulation addictions – cocaine, amphetamine, gambling, gaming – are associated with staying up and throw off the ability to learn and maintain regular sleep habits.

Breaking the Cycle: Addressing Sleep for Better Mental Health

Improving sleep quality is a critical step in supporting mental health and managing mental disorders. Here are some strategies:

1. Behavioral Interventions

- **Cognitive Behavioral Therapy for Insomnia (CBTi):** Targets unhelpful thoughts and behaviors related to sleep.

- **Relaxation Techniques**: Practices like deep breathing, mindfulness, and progressive muscle relaxation reduce pre-sleep anxiety.

2. Lifestyle Adjustments

- **Consistent Sleep Schedule:** Reinforces the body's natural sleep-wake cycle. Try to go to bed within 20-30 minutes of the same time most nights. Even on weekends.
- **Physical Activity**: Regular exercise promotes better sleep and mood.
- **Healthy Diet**: Avoid heavy meals, caffeine, and alcohol for several hours prior to bedtime.
- **Wake Up the Same Time:** Awaken within 20-30 minutes of the same time every day, regardless of bedtime. That is associated with the brain eventually tiring about the same time the night before.

3. Addressing Underlying Disorders

- Seek treatment for co-existing conditions, such as anxiety or depression, that may be contributing to sleep issues.
- To avoid dependency or interference with natural sleep patterns, use medication judiciously and only under professional supervision. A number of prescribed sleep medications can be habit-forming with prolonged regular use. Consult your medical professional about using them. Over-the-counter sleep aids often contain diphenhydramine (Benedryl) or melatonin, though some people use valerian or magnesium, for which the evidence is presently weak.

4. Creating a Sleep-Conducive Environment

- **Optimize bedroom conditions:** dark, cool, and quiet spaces support restful sleep. Do not let your bed become associated with anxiety about sleep, so when you do not fall asleep, leave the bed and come back later when you are more tired. By classical conditioning, the brain will associate a stimulus (.e.g, bed) with what follows (e.g., sleep or anxious restlessness), such that soon the stimulus (bed) will evoke the response (sleep or restlessness). So, no tossing and turning; get up and read non-fiction or do some mindfulness.
- **Minimize screen time** before bed to reduce blue light exposure. More important, however, is what you watch or read on your screens. Make sure it is not emotional arousing or exciting content or designed to keep you alert and focused.

Final Thoughts

The connection between sleep and mental health is undeniable. By understanding the role of sleep as protector of mental health, and sleep problems as 1) a risk factor for reduced mental health and 2) a symptom, we can better prioritize it as an integral part of mental health care. Addressing sleep not only improves nightly rest but also supports emotional stability, cognitive function, and overall quality of life.

If you or someone you know is struggling with sleep or mental health challenges, seek professional support. Better sleep is not just a dream—it's a pathway to improved mental health and well-being.

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