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# The Relationship between Sleep Quality and Anxiety in Adults: A Comprehensive Review

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## Abstract

The interplay between sleep quality and anxiety in adults has garnered significant attention in psychological and medical research, given the profound implications for mental health and overall well-being. This comprehensive review aims to elucidate the intricate relationship between these two constructs by analyzing current literature, integrating results from observational studies, randomized controlled trials, and meta-analyses. Poor sleep quality is often characterized by difficulties in initiating and maintaining sleep, reduced sleep duration, and non-restorative sleep. Such disturbances have been shown to exacerbate anxiety symptoms, contributing to a cyclical pattern where anxiety itself further impacts sleep quality. The review highlights various mechanisms underlying this relationship, including hyperarousal, rumination, and dysregulation of neurobiological pathways, such as the hypothalamic-pituitary-adrenal (HPA) axis. Numerous studies indicate that individuals with anxiety disorders report significantly lower sleep quality compared to their non-anxious counterparts. Specific anxiety disorders, such as generalized anxiety disorder and panic disorder, have been identified as particularly associated with sleep disturbances. Interventions targeting sleep, including cognitive-behavioral therapy for insomnia (CBT-I) and pharmacological treatments, are discussed in relation to their efficacy in alleviating anxiety symptoms and enhancing sleep quality. Moreover, the review addresses the potential bidirectional nature of the relationship, suggesting that not only can poor sleep contribute to increased anxiety, but anxiety may also lead to long-term alterations in sleep patterns. Implications for clinical practice are presented, emphasizing the importance of comprehensive assessments that incorporate both sleep and anxiety evaluations. Finally, the review identifies gaps in the existing literature and suggests directions for future research, including the need for longitudinal studies and investigations into the biological underpinnings of this relationship. By synthesizing current findings, this review contributes to a deeper understanding of the association between sleep quality and anxiety, aiming to inform effective interventions and promote better health outcomes in adults.
**Keywords:** Sleep, Insomnia, Anxiety Disorder, Sleep-Wake Regulation, Panic Disorder, Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Posttraumatic Stress Disorder.

# INTRODUCTION

The intricate connection between sleep quality and anxiety has garnered significant attention in recent research, establishing a bidirectional relationship that affects various populations, including collegiate youth, adolescents, and older adults. The exploration of these dynamics suggests that suboptimal sleep may serve as both a predictor and a consequence of heightened anxiety levels. For instance, a cross-sectional study indicated that collegiate young adults with anxiety symptoms reported higher levels of psychological stress, poor sleep, and inadequate sleep hygiene, effectively linking anxiety and sleep quality. This relationship is further supported by findings among nursing students, where psychological stress was identified as a mediator in the association between sleep quality and anxiety levels,

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emphasizing that inadequate sleep often exacerbates anxiety across different demographic groups [1].

Additionally, geriatric populations reflect similar patterns; a study demonstrated a strong positive correlation between anxiety scores and several dimensions of sleep, such as subjective sleep quality and overall PSQI scores. This correlation hints at the complex interplay whereby poor sleep quality can intensify anxiety symptoms, reinforcing a cycle that hinders overall mental well-being. Importantly, anxiety can precipitate various sleep disturbances, further complicating the diagnosis and treatment of such disorders. For example, symptoms of anxiety frequently manifest as sleep disorders, characterized by difficulty falling asleep and maintaining restful sleep, thus illustrating the profound impact of anxiety on sleep architecture [2].

In the context of specific conditions like obsessive-compulsive disorder (OCD), which frequently co-occurs with anxiety disorders, sleep disturbances are understood to be influenced by comorbid depression and anxiety levels. Studies suggest that when participants diagnosed with OCD were analyzed separately from those with depression and anxiety disorders, a significant reduction in insomnia prevalence was noted, underscoring the role of anxiety in sleep disturbances. The implications of these findings extend to treatment modalities, where interventions such as cognitive-behavioral therapy (CBT) for anxiety have been shown to produce modest improvements in sleep quality for those with concurrent anxiety disorders. Hence, addressing sleep disturbances in therapeutic settings for anxiety disorder management has become a salient focus of ongoing research [3].

Furthermore, longitudinal studies have validated the predictive nature of sleep problems concerning the onset and exacerbation of anxiety. In a distinct longitudinal study involving young Australian women, self-reported sleep issues were linked to an increased risk of anxiety, highlighting that sleep disturbances not only reflect existing anxiety but may also facilitate its emergence. Similarly, among adolescents, evidence suggests that sleep problems serve as a predictor for future anxiety and depression, reinforcing the notion that improving sleep might be a crucial component in the prevention of these mental health issues [4].

Moreover, environmental and lifestyle factors contribute significantly to the sleep-anxiety relationship. For example, isolation and loneliness exacerbated by teleworking conditions during the COVID-19 pandemic have been correlated with poor sleep quality, heightened anxiety, and depressive symptoms. This highlights the importance of contextual factors, as increasing levels of psychological distress have been noted amid societal shifts, further complicating the intersection of anxiety and sleep disturbances. Consequently, as stress levels rise, so does the prevalence of insomnia, illustrating the adverse effects of an anxious lifestyle on sleep quality [5].

The pathophysiological mechanisms underlying the interplay between sleep and anxiety involve multifaceted neurobiological interactions. Increased activity in brain regions responsible for the regulation of stress and emotional responses, such as the amygdala, suggests that anxiety disorders may contribute to altered sleep architecture, resulting in fragmented sleep and other disturbances. This physiological perspective supports the assertion that managing anxiety may not solely improve psychological outcomes but may also lead to enhancements in sleep quality [6].

In sum, the complexities of sleep quality and anxiety reveal a multidimensional relationship that is influenced by psychological, biological, and environmental factors. As research continues to unfold, it becomes increasingly apparent that the interplay of these elements not only emphasizes the need for integrated treatment strategies but also highlights the crucial role sleep plays in maintaining psychological health. The bidirectional nature of sleep and anxiety disorders necessitates a holistic approach in both clinical practice and public health discussions, advocating for comprehensive strategies that promote better sleep hygiene as a means to alleviate anxiety symptoms and enhance overall well-being [7].

**Sleep Physiology**
Human sleep consists of two qualitatively different, brain states, non-rapid eye movement (NREM) and rapid eye movement. (REM) sleep. NREM sleep is further subdivided into stages 1 through 4, with stage 1 being the lightest and stage 4 being the deepest, sleep. Since slow "delta" waves distinguish stages 3 and 4, the stages are often defined as delta sleep or slow-wave sleep (SWS). REM sleep is also called paradoxical sleep because of the close resemblance with the electroencephalogram (EEG) of active wakefulness combined with a "paradoxical" active inhibition of major muscle groups that seems to reflect, a heavy sleep. Normal sleep is characterized electrographically as recurrent cycles of NREM and REM. sleep of about 90 min. In the successive cycles during the night, the duration of stages 3 and 4 decrease, and the proportion of the cycle occupied by REM sleep tends to increase with REM. episodes occurring late in the night having more eye movement, bursts than REM episodes occurring early in the night [8].

Most models of sleep regulation have implicated the monoaminergic and cholinergic systems and the importance of inhibitor}' GABAergic (GABA, γ-aminobutyric acid) mechanisms in sleep regulation is well established:' Since dysfunction of these

neurotransmitter systems have been implicated in anxiety disorders, it is no wonder that one of the chief complaints of anxiety disorder patients relates to sleep alteration.

Sleep-wake regulation is classically viewed as resulting from the interaction of two regulating processes (circadian [C] and homeostatic [S]. The propensity to sleep or be awake at. any given time is a. consequence of a. sleep debt, (process S), and its interaction with signals coming from the circadian clock located in the suprachiasmatic nucleus (process C). Process S is supposed to reflect the activity of a. somnogenic substance that progressively accumulates with prolonged wakefulness, with adenosine being one of the most cited candidates [9]. Both homeostatic and circadian mechanisms are thought, to influence the opposite action of neurons promoting wakefulness and neurons promoting sleep. Wake-active neurons are cholinergic (located in the basal forebrain and in the tegmentum) and monoaminergic (noradrenergic in the locus ceruleus, serotonergic in the dorsal raphe, and histaminergic in the tuberomammillary nucleus), whereas sleep-active neurons are GABAergic and located in the preoptic area of the hypothalamus.

The discovery of the hypocretin (also called orexin) system has brought, new inroads into understanding the sleep-regulatory neural circuit. Hypocretin neurons are located in the lateral hypothalamus and have dense excitatory projections to all monoaminergic and cholinergic cell groups. Recent studies suggested that monoaminergic and hypocretin neurons play a different and complementary role in wakefulness maintenance. For example, the dual effects of hypocretins on arousal and food intake (orexin from "appetite-stimulating") suggest, a more important role for hypocretins in the control of arousal maintenance related to energy homeostasis. In the same way, data summarized in the following section suggest, a role for the norepinephrine (NE)-containing neurons of the locus ceruleus (LC) in stress-induced arousal and concomitant anxiety [10].

**Types of Anxiety Disorders and Their Prevalence**

Anxiety disorders represent a significant segment of mental health concerns among adults, characterized by excessive fear or worry that interferes with daily life. The Diagnostic and Statistical Manual of Mental Disorders classifies these disorders into several types, including Generalized Anxiety Disorder, Panic Disorder, Social Anxiety Disorder, Specific Phobias, and Agoraphobia. Each disorder possesses unique features and varying prevalence rates among different populations, exacerbating public health concerns globally, especially given their comorbidity with other mental health issues and their impact on functionality and quality of life. This review synthesizes current findings on the prevalence and types of anxiety disorders, drawing principally on empirical research conducted over the last decade [11].

Generalized Anxiety Disorder is recognized as the most prevalent anxiety disorder, characterized by chronic and excessive worrying about various aspects of daily life. Estimates suggest that it affects around 6.2% of the adult population. The chronic nature of this disorder often leads to significant impairment, as individuals experience persistent anxiety that can last for several months. In a global context, prevalence varies culturally and geographically, with a systematic review noting that the global prevalence of all anxiety disorders is approximately 7.3%. Understanding the multifaceted nature of this disorder is essential, as it often co-occurs with depressive disorders, leading to compounded difficulties in treatment and management [12].

Panic Disorder, characterized by recurrent unexpected panic attacks and a persistent concern of having more attacks, has a lifetime prevalence of approximately 5.2%. This disorder often manifests in conjunction with Agoraphobia, where individuals avoid places or situations that may trigger panic attacks. Findings indicate that about 34% of patients with Parkinson's Disease experience an anxiety disorder, often presenting with symptoms of panic or generalized anxiety. This prevalence necessitates a thorough understanding of their clinical implications and treatment approaches [13].

Social Anxiety Disorder, primarily affecting social functioning, has a high lifetime prevalence estimated to be approximately 13%. Individuals with this disorder experience significant anxiety in social interactions, leading them to avoid such situations altogether. The fears and avoidance behaviors inherent to this disorder can adversely affect personal relationships, career trajectories, and overall quality of life. Studies show that anxiety disorders, including this one, disproportionately affect women, suggesting an intersection of gender and anxiety that warrants further exploration [14].

Specific Phobias encompass a wide range of irrational fears and affect around 12.5% of the population at some point in their lives. Phobias can range from fears of animals to more situational fears, presenting substantial challenges for those affected. The high prevalence of specific phobias often leads to significant lifestyle alterations, negatively impacting individuals' ability to engage in everyday activities [8].

A systematic review of anxiety disorders indicated that the prevalence among certain demographic groups can reach as high as 39% in women. Furthermore, cultural differences may result in varying prevalence rates and forms of anxiety, highlighting the necessity for adaptable therapeutic strategies that consider diverse backgrounds.

The Global Burden of Disease Study reports that anxiety disorders rank among the leading contributors to disability-adjusted life years worldwide. The interconnectivity between anxiety disorders and other mental health conditions, such as depression, underscores the importance of comprehensive treatment plans that address shared risk factors and comorbidities [15].

Recent studies reveal concerning trends, indicating that the prevalence of anxiety disorders, particularly among younger populations, has markedly increased in recent decades due to factors such as social media, academic pressures, and societal expectations. Among those aged 18-25, anxiety disorders can manifest as developmental dysregulation, emphasizing the need for preventive measures and early interventions during formative years [9].

Other studies have noted the intersection of chronic health conditions and anxiety disorders, with findings indicating a higher prevalence of anxiety disorders among patients with type 2 diabetes, emphasizing that physical health significantly affects mental health outcomes. This pattern confirms the importance of integrated care approaches that consider both physical and mental health when treating patients with chronic conditions [16].

While various effective treatments exist, including psychotherapy and pharmacotherapy, the knowledge of how to best screen and identify these disorders is crucial for improving outcomes. The efficacy of anxiety screening tools in diverse populations needs further investigation to ensure their sensitivity and specificity in detecting varying anxiety disorders [5].

Research also focuses on the potential exacerbation of anxiety symptoms due to lifestyle factors, including dietary habits. A study highlighted the correlation between dietary inflammatory potential and the incidence of anxiety disorders [17].

Ultimately, addressing the prevalence and types of anxiety disorders in adults requires recognizing their complexity, the necessity of cultural considerations, gender differences, and the importance of multidimensional treatment strategies. The impact of these disorders on individuals' health and functionality emphasizes the urgent need for continued research, education, and effective public health interventions to address the mental health crisis associated with anxiety globally. By continually evaluating and adapting strategies informed by empirical research, the aim remains to alleviate the widespread burden of anxiety disorders on individual and public health, ensuring that those impacted receive comprehensive care and support [18].

**The Bi-directional Relationship between Sleep and Anxiety**

The intricate relationship between sleep quality and anxiety represents a significant area of research in the fields of psychology and medicine. This relationship is characterized by a bidirectional dynamic, wherein disturbances in sleep can exacerbate anxiety symptoms, and conversely, heightened anxiety can lead to disruptions in sleep patterns. A multitude of studies indicates that these interactions are not merely correlative but constitute a complex interplay that informs the clinical approaches to both sleep disorders and anxiety treatment. Understanding this interrelation is crucial for developing effective therapeutic interventions aimed at optimizing the well-being of affected individuals [19].

Research indicates that anxiety symptoms often coincide with sleep disturbances, suggesting a high prevalence of sleep disorders among those experiencing anxiety. For instance, a study conducted on employees revealed that many individuals diagnosed with anxiety symptoms also reported sleep disorders. This interdependence suggests that disturbances in sleep not only contribute to anxiety but may also serve as a precursor to its development. A significant percentage of patients diagnosed with Generalized Anxiety Disorder (GAD) report substantial disturbances in sleep, indicating that sleep issues are not simply an ancillary symptom but a core component of the disorder [20].

The implications of this relationship extend beyond mere symptomatology to understanding the underlying mechanisms that link sleep and anxiety. Dysregulated cortisol, a hormone often associated with stress responses, has been proposed as a common pathway linking anxiety to sleep disturbances. High levels of cortisol have been implicated in both reduced sleep quality and increased anxiety, suggesting that interventions targeting sleep quality may also serve to lower stress levels and improve anxiety symptoms. Improved sleep hygiene and cognitive-behavioral approaches to enhance sleep quality could potentially mitigate anxiety disorders, establishing a reciprocal framework in which improved sleep positively influences psychological well-being [21].

Moreover, various studies have highlighted the role of sleep disturbances as transdiagnostic phenomena across psychiatric disorders, including depression and anxiety. A study involving older adults found a pronounced relationship between anxiety symptom clusters and various sleep quality disturbances. Those with specific anxiety presentations also tended to experience greater daytime dysfunction and sleep latency issues, underscoring the complex nature of their interaction. Such relationships indicate that the management of both sleep and psychological health should be approached holistically [22].

Another study focused on college students points to significant changes in anxiety levels following adjustments in sleep quality, emphasizing that enhancing sleep conditions can result in diminished anxiety symptoms. This study highlights the importance of interventions that bolster sleep hygiene in educational environments, as improved sleep not only promotes academic performance but also serves as a protective factor against anxiety disorders [15].

Furthermore, the age-related differences in sleep-anxiety interactions present unique challenges. Geriatric populations are particularly affected by both anxiety and sleep disturbances, with studies revealing that elderly populations report various types of sleep issues related to their anxiety levels. Targeted approaches that consider the specific age-related factors influencing sleep and anxiety are critical for effective intervention and treatment strategies, as older adults often have unique care needs that differ significantly from younger demographics [23].

Interestingly, the relationship between sleep and anxiety is compounded by behavioral aspects such as bruxism, which has been linked to both sleep disturbances and anxiety disorders. Individuals suffering from anxiety often exhibit heightened muscle tension, leading to nocturnal grinding of teeth and other sleep-related disturbances, suggesting that the somatic manifestations of anxiety can have direct repercussions on sleep quality and restorative sleep efficacy [11].

Moreover, the influence of digital device usage on sleep quality cannot be overlooked, especially in younger populations who frequently engage with technology at night. Many contemporary studies have linked the psychological distress caused by problematic smartphone usage, including anxiety and depression, with detrimental effects on sleep quality and associated health outcomes. This digital aspect adds another layer to the bidirectional relationship, where anxiety stemming from social media interactions can lead to insomnia and further exacerbate psychological conditions [24].

Additionally, chronic health conditions such as diabetes and cardiovascular diseases often present with comorbid anxiety and sleep disturbances, highlighting the necessity of integrated healthcare approaches. Studies have indicated that in patients with chronic conditions, the prevalence of anxiety and depression is notably high, correlating with poorer sleep quality and diminished health-related quality of life. Addressing these comorbidities through tailored healthcare plans that incorporate sleep management could potentially enhance overall treatment efficacy.

Numerous studies provide evidence indicating that sleep quality profoundly impacts emotional regulation and has the potential to influence both anxiety symptoms and overall mental health in diverse populations. In adolescents, poor sleep quality is significantly associated with increased symptoms of anxiety, illustrating the need for early interventions to promote healthy sleep habits. With findings suggesting a possible increased risk of anxiety symptoms resulting from poor sleep, the imperative for preventive health strategies becomes evident [25].

Furthermore, cognitive behavioral therapy (CBT), an established treatment for anxiety disorders, has been shown to improve sleep outcomes for individuals with anxiety conditions. The effective integration of sleep-related interventions in anxiety treatment protocols could provide a dual benefit, addressing both the psychological and physiological factors contributing to anxiety disorders. Trajectory studies focusing on the long-term effects of such integrative treatments present promising insights for future clinical practices [26].

Moreover, recent literature underscores the importance of proper assessment tools that provide nuanced insights into the interconnectedness of sleep and anxiety symptoms. Effective screening instruments tailored to the specificities of sleep disturbances and anxiety presentations can lead to timely interventions and improve quality of life for affected individuals. By enhancing diagnostic accuracy, healthcare professionals can implement more personalized treatment plans that attend to individuals' specific needs.

In looking toward future research directions, the investigation of sleep-related factors influencing various anxiety symptom presentations is imperative. Studies are required to further delineate how distinctive anxiety spectra interact with specific sleep disturbances to inform better treatment modalities. Such future investigations can lead to enhanced matches between patients' symptom profiles and therapeutic approaches, ensuring a comprehensive care strategy is employed [27].

The prevailing literature argues for a deeper understanding of the bi-directional relationship between sleep and anxiety, carrying significant implications for clinical practice. By elucidating the mechanisms underlying this relationship, researchers may unravel new pathways for non-pharmacological interventions to improve patients' quality of life. Accordingly, bridging the gap between sleep research and anxiety treatment may pave the way for developing innovative and effective therapeutic strategies applicable across various patient populations [28].

**Interventions and Treatment Options**
The relationship between sleep quality and anxiety is complex and multifaceted, necessitating a comprehensive understanding of the various interventions and treatment options available for addressing both issues. The bidirectional interaction

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between sleep disturbances and anxiety disorders raises the need for integrative treatment solutions that not only target the psychological aspects of anxiety but also prioritize sleep health. This section delves into a diverse array of therapeutic interventions, highlighting their mechanisms of action, effectiveness, and relevance in clinical practice [29].

Cognitive Behavioral Therapy emerges as one of the most prominent psychological interventions, meticulously tailored to address anxiety disorders while also improving sleep quality. Numerous studies illustrate the efficacy of this therapy in enhancing sleep outcomes across various anxiety presentations, particularly generalized anxiety and social anxiety. For example, one study indicated that participants undergoing this therapy for anxiety reported improvements in sleep quality alongside reductions in anxiety symptoms, establishing an interplay between its effectiveness and sleep enhancement. The cognitive restructuring elements inherent in this therapy target maladaptive thoughts and behaviors associated with both anxiety and sleep disturbances, fostering healthier cognitive patterns that contribute to better sleep [30].

Furthermore, recent findings highlight the importance of sleep hygiene education as a cornerstone of this therapeutic approach. Sleep hygiene entails promoting healthy sleep practices, such as establishing a bedtime routine, optimizing the sleep environment, and reducing stimulating activities prior to sleep. This multifaceted approach has shown promise in elucidating the psychological and physiological mechanisms linking sleep and anxiety. For instance, integrating sleep hygiene education into a psychological framework has been noted to ameliorate insomnia symptoms in individuals with anxiety [31].

Mindfulness-based therapies have gained traction as effective interventions for addressing both anxiety and sleep issues. Research suggests that mindfulness practices, such as meditation and mindfulness-based stress reduction, can significantly mitigate symptoms of anxiety while concurrently enhancing sleep quality. Meta-analytic findings indicate that mindfulness-based interventions produce moderate effects on sleep quality improvement, proposing that these therapies may restore emotional regulation and reduce hyperarousal, both of which are known to exacerbate sleep difficulties in anxious individuals [32].

Another notable treatment approach involves the use of pharmacological interventions, particularly selective serotonin reuptake inhibitors. While these medications have been associated with initial insomnia in some patients, studies suggest that they may ultimately improve sleep quality among those with comorbid anxiety and insomnia disorders as therapy progresses. The mechanism by which these medications enhance

sleep appears to involve neurochemical modulation that may lead to improved sleep architecture over time [33].

Acupuncture, an ancient therapeutic technique rooted in traditional medicine, has gained attention for its potential efficacy in treating anxiety and concomitant sleep disturbances. Clinical trials reveal that acupuncture can significantly enhance sleep quality among individuals with anxiety disorders by increasing endogenous melatonin secretion and regulating neurotransmitter levels. Evidence indicates that patients who received acupuncture showed improvements in sleep latency, total sleep time, and frequency of nighttime awakenings, positioning acupuncture as a non-pharmacological alternative for individuals hesitant to use medications [34].

In the context of chronic pain, interventions focusing on optimizing sleep habits have also shown promising results for patients dealing with anxiety. A pilot study exploring a specific sleep intervention program observed marked improvements in anxiety levels as patients engaged in strategies to enhance their sleep. The relation between sleep disturbances and chronic pain-related anxiety suggests that improving sleep quality can mitigate emotional distress accompanying chronic pain conditions.

In addition to individual intervention strategies, integrative treatment programs that encompass combined approaches have garnered interest in contemporary research. The integration of cognitive behavioral techniques with mindfulness practices or pharmacological treatments presents an avenue for holistic care to manage both anxiety and sleep disturbances more effectively. One study highlighted that individuals participating in an integrative program that combined various therapeutic elements experienced significant reductions in anxiety levels and sleep disturbances compared to traditional approaches alone. This suggests that multifaceted therapeutic strategies may be more adept at targeting the complexities of anxiety and sleep than singular interventions [35].

Beyond traditional interventions, emerging treatments such as gamification and technology-based solutions have also gained attention in the realm of anxiety and sleep disorders. For example, active gamification strategies aimed at schoolchildren showed substantial improvements in sleep and reductions in anxiety, indicating potential for non-conventional methods to foster wellness among younger populations. Given the growing role of technology in daily life, leveraging digital platforms for mental health treatment could provide engaging and interactive approaches for managing sleep and anxiety among diverse demographics [36].

The role of lifestyle modifications, including exercise and dietary adjustments, is critical in the

discussion surrounding interventions for improving sleep quality and managing anxiety. Regular physical activity is consistently associated with improved sleep patterns and diminished anxiety symptoms. Studies indicate that exercise enhances sleep onset, duration, and quality, thereby positively affecting emotional well-being. On the dietary front, nutrition-focused interventions may also offer benefits, as specific dietary constituents have been suggested to influence sleep quality and emotional health positively [37].

The consideration of age and developmental factors is crucial when formulating treatment strategies to address sleep disturbances and anxiety. Interventions targeting children and adolescents often require unique adaptations due to developmental considerations. For instance, interventions combining mindfulness-based techniques and educational components addressing sleep hygiene have shown effectiveness in reducing anxiety and improving sleep among young individuals. Tailoring interventions based on developmental stages ensures that strategies are culturally and contextually relevant [38].

Moreover, clinicians must recognize the potential impact of comorbid conditions when diagnosing and treating anxiety and sleep disorders. Co-occurring conditions may complicate the clinical landscape. Treatment plans must consider these complexities to ensure optimal outcomes, including leveraging targeted strategies for each disorder while addressing shared symptoms, such as sleep difficulties [39].

## CONCLUSION

Although sleep disturbances, and particularly severe insomnia complaints, are often encountered in patients with anxiety disorders, polysomnographic studies documented limited alteration of sleep continuity, ie, sleep initiation and sleep maintenance. Regarding sleep architecture, no clear picture emerges for specific anxiety disorders. Discrepancies between studies could have been related to illness severity, diagnostic comorbidity, and duration of illness. It. should be stressed that anxiety in itself is present in many psychiatric disorders and that, therefore the assessment of anxiety as a single influence on sleep is quite difficult. Our current preclinical understanding of arousal responses to aversive stress and some confirmation that similar mechanisms may play a role in human stress, should open the way to the development of more specific therapeutic tools in sleep medicine, particularly for anxiety-induced sleep alterations.

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