

RESEARCH ARTICLES

The Sleep-Gratitude Connection: Positive Thinking for Restful Nights and Better Health

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Poor sleep quality, particularly short sleep durations, is a significant public health concern linked to a range of emotional and physical health problems, including anxiety, depression, and cardiovascular disease. While much research has focused on the negative effects of poor sleep, recent studies suggest that positive psychological factors, particularly gratitude, may play a key role in enhancing sleep quality. Gratitude has been associated with improved psychological well-being and better health outcomes, including enhanced sleep. However, the effectiveness of gratitude interventions in improving sleep quality varies depending on factors such as the type of intervention, its frequency, and individual differences among participants. Interventions involving daily gratitude exercises, such as journaling or listing things for which one is grateful, tend to yield the most consistent positive effects on sleep quality, with studies showing improvements in sleep duration, sleep latency, and reductions in daytime dysfunction. In contrast, less frequent interventions, such as weekly exercises, may produce more modest benefits. Furthermore, participant characteristics, such as age, gender, baseline sleep quality, and mental health status, can influence the outcomes of gratitude interventions. The long-term effectiveness of gratitude interventions on sleep remains mixed, with short-term improvements often seen but long-term sustainability varying. A more systematic approach is needed to optimize gratitude-based strategies for different groups. By understanding these variations, future interventions can be better tailored to specific populations, leading to more effective and long-lasting solutions for improving sleep and overall well-being.

Introduction

Poor sleep quality poses significant challenges to emotional and physical health, with short sleep (defined as less than six hours in a 24-hour period) linked to increased risks of anxiety and depression. In fact, about 75% of depressed people have symptoms of insomnia and suffer from daytime sleepiness (Suni & Dimitru, 2024). In addition to its emotional impact, inadequate sleep is associated with serious physical health outcomes, including conditions like diabetes, hypertension, and heart disease. A meta-analysis from 153 studies involving over 5 million participants revealed that short sleep correlates with a 12% higher risk of death, elevated risks for

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diabetes (37%), hypertension (17%), heart disease (16%), coronary heart disease (26%), and obesity (38%) (Itani et al., 2017). More than a third of Americans report sleeping less than seven hours a night, and around 30% experience insomnia (Currie, 2024). These statistics underscore the urgent need for effective interventions, as poor sleep quality represents a pressing public health concern linked to serious health complications and increased mortality.

While much research focuses on the relationship between negative emotions and poor sleep (Currie, 2024), less attention has been given to how positive emotions might enhance sleep. One promising solution for enhancing sleep quality is through the practice of gratitude. Gratitude encompasses appreciation for aspects of life such as love, health, nature, and beauty, facilitating a sense of fulfillment and encouraging individuals to recognize and appreciate the positive aspects of life (Altier, 2020). It serves as a coping mechanism during difficult times, helping individuals maintain a positive outlook. Gratitude has been positively associated with psychological well-being, independent of other personality traits. Research using the Gratitude Questionnaire-6 (GQ-6) has shown that gratitude correlates with specific facets of extraversion, openness, agreeableness, and conscientiousness, while negatively correlating with certain aspects of neuroticism (Wood et al., 2009). Previous studies also link gratitude to reduced depression in young adults and trauma survivors, and to improved interpersonal relationships among college students (Altier, 2020). In addition, gratitude promotes positive social behaviors (Diniz et al., 2023) and reinforces moral actions, encouraging altruism and appreciation for kindness (Froh et al., 2008).

Besides its psychological benefits, gratitude is associated with better physical health outcomes, particularly among individuals with chronic illnesses (Altier, 2020). Of various psychological traits studied, gratitude appears especially effective in promoting cardiovascular health (Wang & Song, 2023). Specifically, gratitude interventions have been found to improve cardiovascular disease risk biomarkers, asymptomatic heart failure, overall cardiovascular function, and autonomic nervous system activity, highlighting its benefits in clinical applications. Furthermore, gratitude may reduce cardiovascular disease risk indirectly by improving sleep quality, which itself plays a critical role in heart health (Wang & Song, 2023).

Gratitude may be a powerful and accessible tool for individuals seeking to improve both sleep and overall health. Unlike other personality traits that are largely innate, gratitude can be intentionally promoted, with interventions leading to benefits similar to those observed in naturally grateful individuals. A systematic review of 64 randomized clinical trials found that practices like gratitude journaling or sharing appreciation on social media led to increased gratitude, better mental health, reduced anxiety and depression, and improved mood (Diniz et al., 2023). Similarly, Froh et al. (2008) found that gratitude interventions among adolescents, such as counting blessings,

were linked to greater optimism, life satisfaction, and lower negative affect. Moreover, gratitude also enhanced satisfaction with school experiences, both immediately after the intervention and at a three-week follow-up. Given the emotional challenges of adolescence, fostering gratitude may serve as a protective factor that promotes resilience and psychological growth.

Furthermore, Boggiss et al. (2020) conducted a systematic review investigating the impact of gratitude interventions on physical health outcomes and health behaviors, while also assessing study quality. A total of 19 studies were identified from several databases, focusing on randomized trials that included gratitude interventions and measured both objective and subjective health outcomes. Results indicated that while gratitude interventions improved subjective sleep quality in several studies, improvements in other health metrics, such as blood pressure and glycemic control, were less frequently studied and showed mixed results. The findings suggest that gratitude interventions may enhance sleep quality, but further research is needed to fully assess their overall efficacy on physical health outcomes, particularly in patient populations.

While most sleep improvement recommendations focus on environmental changes, bedtime routines, or dietary factors, the role of gratitude remains underexplored. Given the growing body of evidence suggesting that gratitude can enhance sleep quality (Boggiss et al., 2020; Wang & Song, 2023), this literature review aims to consolidate existing research on how gratitude influences sleep and its broader effects on mental and physical health. By reviewing current findings, this review aims to assess the potential of gratitude as a low-cost, effective intervention for improving sleep quality and overall well-being.

Gratitude and Sleep Quality

The Role of Positivity

Several studies have explored the relationship between gratitude and sleep quality. Wood et al. (2009) examined how individual differences in gratitude relate to sleep quality, controlling for factors such as neuroticism and other personality traits. In a sample of 401 participants aged 18 to 68, with 40% reporting clinically impaired sleep, the researchers assessed gratitude, sleep quality (using the Pittsburgh Sleep Quality Index), and pre-sleep thoughts. The findings indicated that higher levels of gratitude were associated with better sleep quality, longer sleep duration, shorter time to fall asleep, and reduced daytime dysfunction. Notably, this connection was influenced by positive pre-sleep thoughts and fewer negative thoughts, factors which typically lead to anxiety and rumination, longer sleep onset and decreased sleep efficiency. This study was the first to demonstrate that gratitude could improve sleep quality independently of other traits, highlighting its potential as a valuable tool for enhancing sleep health and treating insomnia (Wood et al., 2009).

Along similar lines, gratitude may enhance sleep quality by fostering positive emotions. Ong et al. (2017) found that individuals who frequently experienced emotions like joy and happiness tended to report better sleep. They proposed two main explanations for this link: first, positive emotions may encourage healthier behaviors that support sleep; second, they can buffer against stress, which in turn improves sleep quality. These conclusions are consistent with Wood et al. (2009), who found that gratitude promotes both psychological and physiological conditions conducive to restful sleep. However, Ong et al. (2017) also noted that much of the existing research lacks rigor, highlighting the need for more comprehensive studies to clarify the relationship between positive emotions and sleep health.

The Role of Depression

Gratitude may contribute to better sleep by reducing depressive symptoms, which are known to interfere with rest. Alkozei et al. (2017) examined the relationship between gratitude and self-reported sleep quality in young adults, with a particular focus on whether depressive symptoms played a mediating role. The study involved 88 participants aged 18 to 29, who completed the Gratitude Resentment and Appreciation Test (GRAT) and the Pittsburgh Sleep Quality Index (PSQI) to assess gratitude and sleep. The results indicated that individuals with higher gratitude reported more daytime energy and longer sleep duration. These benefits appeared to occur because gratitude was linked to lower levels of depression, which in turn reduced pre-sleep worry, a common barrier to restful sleep. These findings suggest that fostering gratitude may be an effective way to alleviate depressive symptoms that often disrupt sleep.

Expanding on this connection, gratitude has also been shown to buffer against the negative effects of social disconnection on sleep. Although the relationship between depression and poor sleep is well-established (Bouwman et al., 2017; Nyer et al., 2013; Tu et al., 2024), fewer studies have addressed how unmet social needs, such as loneliness or feelings of being a burden, worsen both mental health and sleep outcomes, and whether gratitude can moderate these effects. Altier (2020) investigated this in 223 primary care patients and found that individuals who felt socially disconnected or burdensome were more likely to experience depression, which negatively impacted their sleep. While gratitude did not offset the effects of low belonging, it did lessen the negative impact of perceived burdensomeness on sleep quality. These findings highlight the potential for gratitude to serve as an emotional buffer in the face of social and psychological stressors, particularly among those vulnerable to both depression and disrupted sleep.

Gender and Age Differences

A study examining the link between gratitude and sleep quality among young adults also considered gender differences. Using the Gratitude Questionnaire (GQ-6) and the Pittsburgh Sleep Quality Index (PSQI), 62

males and 62 females were assessed for levels of gratitude and sleep quality. The results revealed a moderate overall correlation between gratitude and sleep, with a notably stronger association among female participants (Narang, 2024). These findings suggest that gender may influence the extent to which gratitude impacts sleep, pointing to the value of exploring gender-specific mechanisms in future research.

Expanding on this, Gupta and Saxena (2024) conducted a comparative study on gratitude and sleep quality in young and middle-aged adults. The study involved 120 participants (60 from each age group), who completed questionnaires assessing both variables. Results showed that while gratitude levels were similar across age groups, sleep quality declined with age. A moderate positive correlation between gratitude and sleep quality was found in both groups, indicating that more grateful individuals tend to sleep better, regardless of age. However, aging was still associated with lower sleep quality, likely due to stress, health concerns, or physical changes. This study highlights the importance of gratitude in promoting sleep quality across different age groups but also notes that sleep quality tends to worsen with age, regardless of gratitude levels.

Gratitude Interventions

Sleep quality is not limited to those who are naturally grateful. Numerous studies show that engaging in gratitude practices can significantly improve sleep quality and benefit other physical health markers. Cognitive strategies, in particular, have been found to be effective in increasing gratitude and improving sleep. Gratitude's sleep benefits are closely tied to the positive thought patterns it encourages. Grateful individuals tend to focus on affirming thoughts before bed, such as appreciation for relationships or life circumstances, and are less likely to dwell on stressors that increase arousal and disrupt sleep (Wood et al., 2009; Digdon & Koble, 2011). This mental shift promotes reduced arousal, better subjective sleep quality, and longer sleep duration. Therefore, cultivating gratitude may enhance sleep by fostering a more positive emotional and cognitive state.

Mindfulness may further support this effect by increasing gratitude and well-being. Junca-Silva et al. (2023) found that mindfulness can enhance gratitude, which in turn supports improved well-being. Similarly, Black et al. (2015) conducted a randomized clinical trial comparing mindful awareness practices (MAPs) with sleep hygiene education in 49 older adults experiencing moderate sleep disturbances. Over six weeks, participants in the MAPs group showed significant improvements in sleep quality (measured by PSQI), along with reductions in insomnia symptoms, depression, and fatigue. These findings suggest that mindfulness-based interventions can improve sleep and related daytime functioning in older adults.

Digdon and Koble (2011) further explored self-help sleep strategies in a study with 41 university students experiencing racing thoughts at bedtime. Participants were randomly assigned to one of three interventions: constructive worry, imagery distraction, or gratitude. Over two weeks, all

three groups reported reduced pre-sleep worry and arousal, leading to improved sleep quality. No single method outperformed the others, and all were rated as moderately helpful, suggesting that accessible strategies like gratitude and mindfulness can be effective for sleep improvement, especially where professional help is unavailable.

Gratitude may also support physical health by improving biological markers tied to sleep. Jackowska et al. (2015) conducted a randomized controlled trial with 119 young women, comparing a two-week gratitude intervention to an active control group and a no-treatment group. The gratitude group experienced significant increases in well-being, optimism, and sleep quality, along with reduced blood pressure. While cortisol levels remained unchanged, the results suggest that gratitude may foster healthier biological function and restorative behaviors, potentially reducing long-term health risks.

Supporting these findings, Boggiss et al. (2020) conducted a systematic review of 19 randomized trials investigating the effects of gratitude interventions on physical health outcomes. While the majority of studies reported improvements in subjective sleep quality, the evidence for other health metrics, such as blood pressure and glycemic control, were mixed. Although some studies exhibited methodological limitations, the overall findings suggest that gratitude interventions are promising for enhancing sleep quality, although further rigorous research is necessary to determine their broader impact on physical health, particularly in clinical populations.

Bidirectional Nature of Gratitude and Sleep

While much of the existing research emphasizes how gratitude can enhance sleep, recent findings suggest that the relationship may be bidirectional. Do et al. (2024) investigated whether sleep itself might influence the development of positive traits such as gratitude and resilience. In their study, 90 adults were randomly assigned to one of three sleep conditions: going to bed early, going to bed late, or maintaining typical sleep patterns, over the course of a workweek, with sleep duration monitored. Participants who went to bed earlier gained an average of 46 additional minutes of sleep, while those in the late-sleep group lost approximately 37 minutes. Notably, individuals who extended their sleep reported significant increases in well-being, resilience, and gratitude, whereas those with restricted sleep experienced declines in these traits. Moreover, participants who slept more wrote almost twice as much in their gratitude journals compared to the other groups. These findings suggest a reciprocal relationship; while gratitude may improve sleep quality, increased sleep duration may also enhance gratitude and other prosocial emotions, highlighting the dynamic interplay between rest and emotional well-being.

Discussion

Extensive research highlights the strong connection between gratitude and overall well-being, revealing it to be a powerful psychological and physiological resource. A growing body of evidence indicates that cultivating

gratitude boosts positive emotions, life satisfaction, and happiness, while simultaneously reducing symptoms of stress, anxiety, and depression. Psychological studies consistently show that individuals who engage in gratitude practices experience greater emotional resilience, optimism, and social connectedness. The Gratitude Questionnaire-Six-Item Form (GQ-6), widely used in cross-cultural research, indicates that gratitude correlates positively with increased life satisfaction, perceived social support, and a stronger sense of purpose. These psychological benefits are further linked to reduced depression and anxiety, more adaptive coping mechanisms, and improved emotional stability, key factors that also influence sleep quality. Overall, these findings support the main thesis of this review: gratitude plays a significant role in improving sleep, leading to better mental and physical health.

Beyond emotional well-being, gratitude is recognized for its impact on physical health. Studies report that individuals who practice gratitude experience fewer physical symptoms of illness, lower blood pressure, improved immune function, and notably, better sleep. As discussed throughout this review, gratitude can reduce pre-sleep arousal and intrusive thoughts, both common barriers to falling and staying asleep, thus improving sleep onset, duration, and quality. These findings highlight the potential for gratitude-based interventions to serve as non-pharmacological strategies for improving sleep and promoting overall health.

The practical applications of these findings are wide-ranging. In clinical settings, incorporating gratitude practices, such as journaling or daily reflection, into established therapies like cognitive behavioral therapy for insomnia (CBT-I) may provide a simple, but effective strategy for managing negative thought patterns and promoting restorative sleep. This approach may be especially beneficial for individuals experiencing chronic stress, anxiety, or mood disorders that disrupt sleep. Additionally, mindfulness-based programs could be strengthened by integrating gratitude-focused exercises to enhance emotional resilience and reduce psychological distress.

Outside clinical settings, gratitude interventions have also demonstrated potential in workplace environments, especially among shift workers who are prone to irregular sleep and elevated stress. Research suggests that employees who engage in gratitude practices report higher job satisfaction, stronger interpersonal relationships, and lower levels of burnout, factors that indirectly support healthier sleep patterns and greater workplace productivity. As a result, implementing gratitude-focused strategies within employee wellness programs could promote both individual and organizational well-being, further contributing to improved sleep.

Educational institutions represent another ideal setting for gratitude interventions. Students often struggle with academic pressure, emotional stress, and disrupted sleep. Structured gratitude practices, such as journaling or classroom reflections, may help reduce stress, foster better sleep habits, and enhance overall mental health. Research supports the idea that students who

regularly engage in gratitude exercises experience improved focus, motivation, and cognitive performance, all of which are benefits that directly support academic achievement and emotional growth.

In conclusion, this review emphasizes gratitude as a cost-effective, accessible, and powerful intervention with wide-reaching benefits for enhancing sleep quality and promoting both mental and physical well-being. The growing body of evidence strongly supports the integration of gratitude-based strategies in therapeutic, workplace, and educational contexts. As future research continues to refine these interventions and examine their long-term effects, gratitude is likely to be recognized as an essential part of promoting overall health.

Limitations

While the findings on the relationship between gratitude and sleep are promising, several methodological limitations should be addressed. Much of the existing research relies on self-reported data, which can introduce biases and limit reliability. Although self-reports provide valuable insights into participants' subjective experiences, they lack the precision of objective sleep assessments, such as actigraphy. To improve future studies, researchers should incorporate physiological sleep tracking methods for a more accurate understanding of how gratitude influences sleep patterns.

Another limitation concerns the measurement of gratitude itself. While widely used tools like the Gratitude Questionnaire-Six-Item Form (GQ-6) have been validated across diverse populations, they may not fully capture the complexity of gratitude as both an emotion and a practice. Cultural variations in how gratitude is expressed and experienced could introduce measurement bias, potentially influencing study outcomes. More culturally sensitive and context-specific measures may be needed to ensure that gratitude is accurately assessed across different demographic groups.

Furthermore, many studies use cross-sectional designs, which make it difficult to establish a clear causal relationship between gratitude and improved sleep. Cross-sectional research captures data at a single point in time and does not account for pre-existing individual differences, such as baseline mental health, personality traits like optimism, or openness to psychological interventions. These factors may influence both gratitude levels and sleep quality. For instance, individuals with high levels of gratitude may also possess other traits that contribute to better sleep, rather than gratitude itself being the sole driver.

To address these gaps, future research should prioritize longitudinal studies that track participants over time, especially those with chronic sleep difficulties, to evaluate the lasting impact of gratitude interventions. Randomized controlled trials (RCTs) would also be valuable in isolating the effects of gratitude from other variables and establishing causal links. By incorporating diverse samples, culturally sensitive tools, and objective sleep measures, future studies can deepen our understanding of how gratitude affects sleep and overall mental well-being.

Conclusion

Gratitude practices have been consistently linked to reduced negative emotions, lower stress, and enhanced emotional resilience, key factors that contribute to improved sleep quality and overall well-being. An expanding body of research supports the view that gratitude serves as a potent psychological resource, benefiting both sleep and mental health across diverse populations. Because sleep supports cognitive performance, emotional regulation, and key physiological functions, including cardiovascular, metabolic, and immune systems, any intervention that improves sleep carries meaningful public health implications. Chronic sleep deprivation has been associated with an increased risk of conditions like cardiovascular disease, diabetes, obesity, and certain cancers, as well as a higher likelihood of accidents and fatigue-related impairments (Ramar et al., 2021).

Both short-term sleep deprivation and long-term sleep restriction, especially when exacerbated by circadian misalignment or untreated sleep disorders, negatively impact mental and physical health and pose risks to public safety. Therefore, it is promising to see evidence suggesting that increasing sleep duration in chronically sleep-deprived individuals can lead to notable health improvements. In this context, gratitude emerges as a promising, low-cost intervention that may help mitigate sleep disturbances and enhance mental well-being. Adolescents, who often face academic pressures, social stressors, and emotional fluctuations, could particularly benefit from gratitude-based interventions, as these factors can disrupt sleep. Similarly, individuals experiencing chronic stress, health issues, or persistent insomnia could see improvements by incorporating gratitude into their daily routines.

However, despite these encouraging findings, several important research gaps remain. While many studies demonstrate the short-term benefits of gratitude for sleep and well-being, there is a need for more longitudinal research to determine whether these effects are sustained over time. Future studies should also explore how gratitude interventions can be tailored to specific populations, such as older adults, individuals with chronic illnesses, and those with clinical sleep disorders, to assess their effectiveness in different contexts. Comparative research could also reveal whether gratitude interventions are as effective as or complementary to established treatments like cognitive behavioral therapy for insomnia (CBT-I). Additionally, examining the preventive potential of gratitude among high-risk groups could provide valuable insights.

Another critical factor to consider is the role of cultural and socioeconomic influences, as gratitude may be expressed and/or experienced differently across demographic groups. In addition, research into how gratitude influences sleep in individuals with coexisting mental health conditions, such as anxiety, depression, or PTSD, could yield further insights into its therapeutic potential. Finally, exploring the combined effects of gratitude with other interventions, such as mindfulness, relaxation techniques, or behavioral

therapies, could help amplify its benefits for both sleep and psychological well-being. Addressing these gaps will be crucial for establishing gratitude as an accessible, evidence-based strategy for improving sleep health, emotional resilience, and overall quality of life.

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