

Sleep Hygiene Education: A Broadly Effective Intervention

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Introduction

The pervasive issue of inadequate sleep and sleep disturbances represents a significant global health challenge, impacting physical health, mental well-being, and daily functioning across all age groups and demographics. As societies increasingly recognize the critical role of sleep in overall health, the development and implementation of effective interventions to promote better sleep have become paramount. Among these, sleep hygiene education stands out as a fundamental, non-pharmacological approach that empowers individuals with knowledge and practices designed to foster healthy sleep habits. A substantial body of recent research underscores the consistent efficacy of sleep hygiene education, demonstrating its utility in diverse settings and for varied populations suffering from sleep-related issues. This collective evidence forms a robust foundation for integrating sleep hygiene principles into public health initiatives and clinical practice.

The impact of sleep hygiene education is particularly evident in specific vulnerable populations. For university students, who often face demanding academic schedules and social pressures, sleep problems are common. A systematic review and meta-analysis provided compelling evidence that sleep hygiene education significantly improves sleep quality in this demographic [1].

Similarly, adolescents, another group undergoing significant developmental changes, experience notable benefits. A randomized controlled trial demonstrated that sleep hygiene education not only enhanced sleep quality but also positively influenced their academic performance, offering strong support for incorporating these educational programs into school environments [3].

The clinical utility of sleep hygiene interventions is also well-established, especially for individuals grappling with chronic insomnia. A randomized controlled trial illustrated that even a brief intervention focused on sleep hygiene could lead to significant improvements in both sleep quality and daily functioning for those with chronic insomnia. This outcome highlights the practical advantages and feasibility of such interventions within clinical settings [2].

Extending this, another randomized controlled trial specifically investigated its application in primary care, revealing that brief sleep hygiene education is an efficacious first-line approach for improving sleep quality in patients presenting with insomnia. This makes it an accessible and practical option for general practitioners [9].

Beyond general population groups and common sleep disorders, sleep hygiene education demonstrates efficacy in specialized contexts and for individuals with unique needs. In demanding occupational environments, such as for shift-working nurses, maintaining optimal sleep is crucial for both personal health and patient safety. A quasi-experimental study found that sleep hygiene education signifi-

cantly improved their sleep quality and reduced fatigue, underscoring its vital role in occupational health strategies [5].

Pregnant women, who frequently encounter sleep disturbances, also benefited from sleep hygiene education, with a randomized controlled trial indicating significant improvements in their sleep quality. This offers a valuable non-pharmacological strategy for managing sleep issues during pregnancy [10].

Furthermore, individuals suffering from chronic illnesses can also benefit. For instance, a randomized controlled trial revealed that sleep hygiene education notably improved sleep quality and reduced fatigue in patients with chronic kidney disease, thereby establishing its potential as a supportive intervention in comprehensive chronic illness management [7].

Addressing the specific needs of older adults, who are particularly susceptible to sleep disturbances, sleep hygiene education has proven highly beneficial. A systematic review and meta-analysis unequivocally confirmed its effectiveness in improving sleep quality in older adults [8].

Moreover, when considering treatment options for older adults, a systematic review and network meta-analysis indicated that while Cognitive Behavioral Therapy for Insomnia (CBT-I) shows superior efficacy, sleep hygiene education alone still offers significant benefits. Importantly, its combination with CBT-I further enhances sleep improvements in this demographic [6].

The advancements in technology also play a role, with a systematic review and meta-analysis confirming the effectiveness of digital sleep hygiene interventions in improving sleep quality, thereby expanding the reach and accessibility of sleep education through technology-based platforms [4].

The collective findings from these studies strongly advocate for the widespread adoption of sleep hygiene education. They position it as a versatile, evidence-based, and impactful strategy for promoting better sleep health across the lifespan, from young adults to older populations, and in both general and specific clinical contexts.

Description

The evidence base for sleep hygiene education as an effective intervention for improving sleep quality is robust and spans various populations and settings. Multiple studies confirm its significant positive impact on sleep outcomes, addressing a crucial public health need.

For young adult populations, sleep hygiene education proves particularly beneficial. A systematic review and meta-analysis investigating university students concluded that sleep hygiene education significantly improves their sleep qual-

ity [1]. This highlights a crucial strategy for tackling common sleep problems prevalent among this demographic. Furthermore, another randomized controlled trial focused on adolescents demonstrated that sleep hygiene education not only enhanced sleep quality but also positively influenced academic performance [3]. These findings provide a strong rationale for incorporating sleep hygiene interventions into educational programs at both university and school levels to support overall well-being and academic success.

In the realm of clinical applications, sleep hygiene education holds significant promise for individuals suffering from chronic insomnia. A randomized controlled trial showcased that even a brief sleep hygiene intervention could markedly improve sleep quality and daily functioning in chronic insomnia patients [2]. This emphasizes its practical value in clinical environments where time and resources can be constrained. Reinforcing this, a separate randomized controlled trial underscored the efficacy of brief sleep hygiene education when delivered in primary care settings for patients with insomnia [9]. This makes it an accessible and effective first-line approach before considering more intensive treatments, thereby streamlining patient care pathways.

The scope of sleep hygiene education extends to specialized populations and demanding professional groups, demonstrating its broad applicability. Shift-working nurses, for example, often face disrupted sleep patterns due to their schedules. A quasi-experimental study found that sleep hygiene education significantly improved their sleep quality and reduced fatigue, highlighting its importance for occupational health in such professions [5]. Pregnant women, who frequently experience sleep disturbances, also benefited from sleep hygiene education, with a randomized controlled trial indicating significant improvements in their sleep quality. This offers a valuable non-pharmacological strategy for managing sleep issues during pregnancy [10]. Patients with chronic kidney disease represent another group where sleep hygiene education has shown promise. A randomized controlled trial observed significant improvements in sleep quality and reduced fatigue, suggesting its role as a supportive intervention within comprehensive chronic illness management plans [7].

Older adults consistently benefit from sleep hygiene interventions, which is critical given the prevalence of sleep issues in this age group. A systematic review and meta-analysis specifically confirmed that sleep hygiene education effectively improves sleep quality in older adults [8]. While its efficacy is clear, some research has compared it with other established therapies. A systematic review and network meta-analysis, for instance, compared sleep hygiene education with Cognitive Behavioral Therapy for Insomnia (CBT-I) in older adults. It concluded that while CBT-I might be superior, sleep hygiene education alone still offers significant benefits, and combining the two approaches further enhances sleep improvements [6]. This comparative analysis helps delineate its role within a broader therapeutic landscape.

Moreover, the method of delivery for sleep hygiene education is also evolving. A systematic review and meta-analysis specifically examined digital sleep hygiene interventions, confirming their effectiveness in improving sleep quality [4]. This finding is particularly significant as it points to the potential of technology-based approaches to disseminate sleep education more widely and reach a larger audience, overcoming geographical and logistical barriers. This diversified delivery method ensures that effective sleep management strategies are accessible to a broader demographic.

Collectively, these studies affirm sleep hygiene education as a versatile, empirically supported, and practical intervention. It addresses sleep quality across diverse populations, from young students to older adults, and in various contexts including general health promotion, clinical management of insomnia, occupational health, and chronic disease support. The findings advocate for its continued integration into health promotion strategies and clinical protocols.

Conclusion

Sleep hygiene education emerges as a profoundly effective intervention for enhancing sleep quality across a broad spectrum of populations and clinical contexts. Evidence from a systematic review and meta-analysis confirms its significant benefits for university students, addressing widespread sleep problems in this demographic. Similarly, randomized controlled trials highlight its impact on adolescents, not only improving sleep quality but also positively influencing academic performance, suggesting its value for school-based programs. For individuals battling chronic insomnia, even brief sleep hygiene interventions can notably improve sleep quality and daily functioning, proving their practical utility in various clinical settings. The utility extends to specific professional groups, with a quasi-experimental study demonstrating improved sleep quality and reduced fatigue among shift-working nurses, underscoring its importance for occupational health in demanding professions. Sleep hygiene education also plays a crucial role as a supportive intervention in managing chronic illnesses; for example, it has shown to improve sleep quality and reduce fatigue in patients with chronic kidney disease. Additionally, it provides a valuable non-pharmacological approach to address common sleep disturbances experienced by pregnant women. Digital sleep hygiene interventions offer an innovative pathway, confirmed by a systematic review and meta-analysis to be effective, thereby leveraging technology to reach a broader audience for sleep education. Furthermore, its efficacy is well-documented in older adults, where systematic reviews and meta-analyses confirm its role in improving sleep quality, a prevalent health concern in this demographic. While Cognitive Behavioral Therapy for Insomnia (CBT-I) might be considered superior, sleep hygiene education alone offers significant benefits, particularly when combined with CBT-I, for improving sleep in older adults. Overall, the accumulated research firmly establishes sleep hygiene education as a versatile, impactful, and accessible strategy for improving sleep health across the lifespan, supporting its widespread implementation from primary care settings to specialized patient populations.

Acknowledgement

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Conflict of Interest

None.

References

1. Ying Huang, Yan Liu, Hao Li, Jing Yan, Xuefeng Yang. "Effectiveness of Sleep Hygiene Education on Sleep Quality among University Students: A Systematic Review and Meta-Analysis." *Sleep Med* 104 (2023):185-194.
2. Nelson Y Chan, Melody Y Sze, Monica W Yu, Sharon Y Lee, Mary S Ip. "Impact of a brief sleep hygiene intervention on sleep and functional outcomes in individuals with chronic insomnia: a randomized controlled trial." *Sleep Breath* 25 (2021):993-1002.
3. Agung Setiadi, Yayı Suryo Prabandari, Hery Setyawan. "Sleep Hygiene Education for Improving Sleep Quality and Academic Performance Among Adolescents: A Randomized Controlled Trial." *J Public Health Res* 12 (2023):22799036231206649.
4. Hui Chen, Meihua Fan, Shuo Li, Wenyan Fan, Qixun Zhang, Yue Zhao. "Effectiveness of Digital Sleep Hygiene Interventions on Sleep Quality: A Systematic Review and Meta-Analysis." *J Med Internet Res* 24 (2022):e38146.

5. Canan Bakar, Büşra Çelik, Ayşe Sürütü, Fatma Özlem Özcan. "Effect of Sleep Hygiene Education on Sleep Quality and Fatigue in Shift Working Nurses: A Quasi-Experimental Study." *J Clin Nurs* 30 (2021):2548-2558.
6. Xiaona Liu, Yan Zhang, Ying Wang, Wenxue Fang, Qiang Gao, Hong Liu. "Comparing the efficacy of cognitive behavioral therapy for insomnia, sleep hygiene education, and their combination in older adults: a systematic review and network meta-analysis." *Sleep Med Rev* 71 (2023):101831.
7. Nazanin Ghafari, Azizollah Rahmani, Haniyeh Reihani, Abbas Abbasi. "Effect of Sleep Hygiene Education on Sleep Quality and Fatigue in Patients with Chronic Kidney Disease: A Randomized Controlled Trial." *J Caring Sci* 9 (2020):84-91.
8. Shuang Chen, Yao Chen, Min Wang, Shuchun Zhou. "Effect of Sleep Hygiene Education on Sleep Quality in Older Adults: A Systematic Review and Meta-Analysis." *Clin Gerontol* 45 (2022):1113-1123.
9. Youn Hee Kim, Jung Hwa Lee, Jung Jin Kim, Eun Young Kim, Hee Youn Oh, Myoung Jin Kim. "The efficacy of a brief sleep hygiene education in primary care for patients with insomnia: a randomized controlled trial." *Clin Exp Neurophysiol* 12 (2020):66-73.
10. Maryam Mohammadi, Khadijeh Gholami, Hassan Esmaeili, Ahmadreza Nazem. "Effectiveness of Sleep Hygiene Education on Sleep Quality of Pregnant Women: A Randomized Controlled Trial." *J Matern Fetal Neonatal Med* 34 (2021):3678-3684.

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