

Acupressure as a Complementary Therapy for Improving Sleep and Reducing Stress

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Abstract

Sleep disturbance and psychological stress are closely related problems that can impair concentration, emotional regulation, physical functioning, and quality of life. Complementary approaches that are non-invasive and relatively easy to administer have therefore received increasing research attention. Acupressure involves manual stimulation of selected points and has been investigated for insomnia, poor sleep quality, anxiety, and stress-related symptoms. This paper reviews acupressure as a complementary therapy for improving sleep and reducing stress, focusing on possible mechanisms, sleep outcomes, psychological stress, physiological responses, self-administered approaches, safety, and limitations of current evidence. Recent systematic-review evidence suggests that acupressure can improve subjective sleep quality in adults with insomnia and may also reduce anxiety. A 2023 systematic review and meta-analysis of randomized trials found significant improvements in Pittsburgh Sleep Quality Index scores and several objective sleep parameters following acupressure, although substantial heterogeneity was present. Another meta-analysis reported beneficial effects of acupressure on anxiety, while a review of acupressure for stress-related outcomes found promising but variable findings. Overall, acupressure may be a useful adjunct to sleep hygiene, behavioural strategies, and evidence-based clinical care, but it should not replace appropriate assessment and treatment of persistent sleep or mental-health disorders.

Keywords

Acupressure; Sleep Quality; Insomnia; Stress; Anxiety; Complementary Therapy; Sleep Management; Mental Well-Being

Introduction

Sleep and stress are closely interconnected. Psychological stress can make it difficult to initiate or maintain sleep, while insufficient or poor-quality sleep may increase emotional reactivity and reduce the ability to cope with everyday demands. Persistent sleep disturbance can affect concentration, mood, productivity, physical health, and quality of life.

Standard management of insomnia and stress may involve sleep hygiene, cognitive behavioural approaches, relaxation strategies, lifestyle modification, and pharmacological treatment when appropriate. Complementary approaches may provide additional options for individuals who prefer non-drug strategies or require supportive symptom management.

Acupressure is a non-invasive technique involving pressure on selected points of the body. A 2023 systematic review and meta-analysis of 33 randomized controlled trials involving 2,343 adults with insomnia found significant improvements in Pittsburgh Sleep Quality Index scores and several objective sleep outcomes following acupressure, although heterogeneity was substantial. [cite]turn0search0[

Evidence also suggests possible benefits for stress and anxiety. A systematic review and meta-analysis of 27 randomized trials found a significant reduction in anxiety following acupressure, although heterogeneity was very high. [cite]turn0search1[A 2024 review of acupressure for stress-related outcomes similarly concluded that acupressure may improve stress, anxiety, and related symptoms, while emphasizing the need for stronger standardized evidence. [cite]turn0search3[

This paper examines acupressure as a complementary therapy for improving sleep and reducing stress. It discusses the relationship between sleep and stress, the principles and mechanisms of acupressure, evidence for sleep improvement, effects on anxiety and stress, practical self-management, safety, limitations, and future research.

1. Relationship Between Sleep and Stress

Sleep and stress influence each other through behavioural, psychological, and physiological pathways. Stress may increase cognitive arousal and make it difficult to relax at bedtime. Repeated sleep disruption may subsequently contribute to fatigue, irritability, reduced concentration, and increased perceived stress.

Because of this relationship, interventions that address both sleep and stress may provide broader benefits than approaches focused on either outcome alone. However, improvement in one domain does not necessarily guarantee improvement in the other.

2. Concept and Principles of Acupressure

Acupressure involves controlled manual stimulation of specific points on the body. It is historically related to acupuncture but does not use needles. Pressure may be delivered by a practitioner, through a pressure device, or through guided self-application for selected techniques.

Research protocols vary in the pressure points used, pressure intensity, duration, treatment frequency, and intervention period. Points such as HT7, SP6, and other body or auricular points have been investigated for sleep and stress-related outcomes.

3. Possible Mechanisms of Action

Several mechanisms may explain the potential effects of acupressure on sleep and stress. Stimulation of sensory pathways may influence autonomic regulation and relaxation, potentially reducing physiological arousal. Reduced tension and discomfort may also make it easier for individuals to initiate or maintain sleep.

Psychological mechanisms may include focused attention, relaxation, expectancy, and a sense of active participation in symptom management. These factors may contribute to perceived improvements even when the specific physiological effect of individual pressure points remains uncertain.

4. Effect of Acupressure on Sleep Quality

Sleep quality is commonly assessed using subjective instruments such as the Pittsburgh Sleep Quality Index (PSQI), while objective outcomes may include sleep onset latency, total sleep time, sleep efficiency, and nocturnal awakenings.

The 2023 systematic review and meta-analysis of 33 randomized controlled trials involving 2,343 adults with insomnia found significant improvements in PSQI scores, sleep onset latency, total sleep time, sleep efficiency, and nocturnal awakenings. The authors noted substantial heterogeneity and methodological limitations, so the results should be interpreted with caution. ☐cite☐turn0search0☐

These findings suggest that acupressure may improve both perceived and selected objective aspects of sleep, although more standardized trials are needed to determine its clinical significance.

5. Effect on Stress and Anxiety

Stress is often accompanied by anxiety, physiological arousal, and difficulty relaxing. Acupressure may support stress reduction through relaxation and autonomic modulation.

A 2022 systematic review and meta-analysis of 27 randomized controlled trials found that acupressure significantly reduced anxiety compared with control conditions, but statistical heterogeneity was very high. ☐cite☐turn0search1☐

Evidence specific to stress outcomes is also promising. A 2024 systematic review reported potential improvements in stress, anxiety, depression, sleep, and related psychological outcomes following acupressure interventions, although the included studies differed considerably in populations and protocols. ☐cite☐turn0search3☐

6. Effects on Physiological Stress Responses

Stress can produce measurable physiological responses such as increased heart rate, altered heart-rate variability, and changes in blood pressure or skin conductance. Objective physiological measures can therefore complement self-reported stress scales.

Some acupressure studies have reported changes in cardiovascular or autonomic measures alongside reductions in stress and anxiety. However, physiological outcomes are not consistently reported, and findings vary according to population, intervention, and

measurement method. More research is needed to establish whether observed psychological improvements are accompanied by reliable long-term physiological changes.

7. Self-Administered Acupressure and Sleep Management

Self-administered acupressure may be attractive for sleep management because it can potentially be practiced at home and incorporated into a bedtime routine. A brief, structured technique may also provide an opportunity for relaxation before sleep.

Self-administration should nevertheless be taught appropriately. Users should understand that acupressure is a complementary strategy and that persistent insomnia may require assessment for underlying causes such as sleep apnea, medication effects, depression, anxiety disorders, pain, or other health conditions.

8. Safety and Practical Considerations

Acupressure is generally non-invasive and has a favorable safety profile when applied appropriately. Pressure should be comfortable and should not be applied over injured, infected, inflamed, or otherwise compromised areas.

Acupressure should not replace professional evaluation for persistent insomnia or severe psychological distress. Individuals with significant sleep problems, daytime impairment, or symptoms suggestive of an underlying medical or mental-health disorder should seek appropriate clinical assessment.

9. Limitations and Future Research

The current evidence has several limitations. Studies differ in acupoint selection, pressure intensity, duration, frequency, comparator conditions, and outcome measurement. The 2023 sleep meta-analysis found substantial heterogeneity, while the anxiety literature has also reported very high between-study variation. □cite□turn0search0□turn0search1□

Future research should use larger randomized controlled trials, standardized acupressure protocols, credible sham controls, and validated sleep and stress measures. Objective sleep assessment through actigraphy or polysomnography may strengthen the evidence. Longer follow-up is also necessary to determine whether improvements are sustained.

Research should further examine whether acupressure provides additional benefit when combined with cognitive behavioural therapy for insomnia, sleep hygiene education, mindfulness, exercise, or other established interventions.

Conceptual Framework

The following framework summarizes a possible pathway through which acupressure may contribute to improved sleep and reduced stress. Baseline sleep quality, stress severity, acupoint selection, treatment duration, and adherence may influence outcomes.

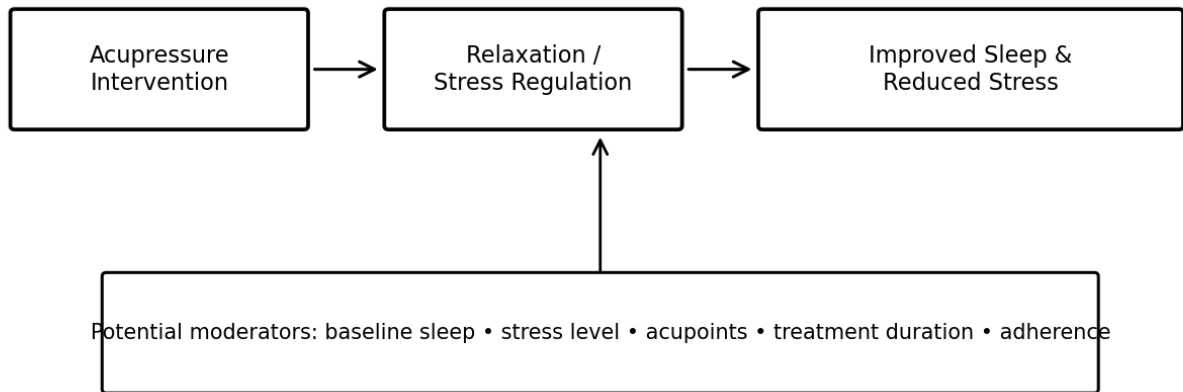


Figure 1. Conceptual framework for the potential role of acupressure in improving sleep and reducing stress.

Conclusion

Acupressure shows promising potential as a complementary therapy for improving sleep and reducing stress. Evidence from systematic reviews suggests improvements in subjective sleep quality and selected objective sleep parameters among adults with insomnia, while broader evidence supports possible reductions in anxiety and stress-related symptoms. [cite0turn0search0turn0search1](#)

The evidence should nevertheless be interpreted cautiously because studies vary considerably in intervention protocols, participant characteristics, and methodological quality. Acupressure should be viewed as an adjunct to evidence-based sleep and stress management rather than a replacement for clinical assessment or established treatment.

Further high-quality research with standardized protocols, credible control conditions, objective sleep measures, and longer follow-up is required. Such studies will help clarify which populations are most likely to benefit and how acupressure can best be integrated into comprehensive sleep and stress-management programs.

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