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REVIEW ARTICLE

Herbal Teas for Managing Sleep Paralysis and Other Sleep Disorders: A Comprehensive Review

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ABSTRACT

Background: Awareness of sleep paralysis holds a paramount position in our society. As studies suggest, herbal teas are widely accepted for the relief of stress, anxiety, and other symptoms of sleep paralysis and disorders.

Objective: This review aims to understand the neurophysiology of sleep paralysis, frequency, and community perception, highlighting the active constituents of herbal teas effective for treatment.

Methodology: Our systematic literature review analyzed thoroughly 57 articles on sleep disorders, awareness in the general public, and the impact of herbal tea on sleep paralysis, concentrating on empirical research, reviews, and meta-analyses published from 2010 to 2024, emphasizing and limiting the review research on its pathophysiology, epidemiology, treatment, and risk factors.

Result: Sleep disorders or somnopathy, are believed to interfere with people's everyday activities and their mental health. Insomnia, narcolepsy, and sleep apnea are all prevalent sleep disorders. Sleep paralysis is a condition in which an individual is unable to perform any voluntary movement, often accompanied by hallucinations and finally ending the state by an abrupt and violent breakout or external stimuli. Sleep paralysis affects 8% of the general population, occurring more frequently in females typically beginning in childhood or early adolescence. An irregular sleep cycle, mental stress, or lack of sleep might trigger the illness due to disturbances in REM sleep. The available treatments for sleep palsy have not been well-researched. Nevertheless, due to its continuing popularity, the use of herbal teas has become a generally accepted therapy for the reduction of the symptoms associated with sleep paralysis and disorders. It is observed that people take consolation and relief in the fact that this ailment is common and often not life-threatening.

Conclusion: There is a significant gap in the knowledge and awareness among the general public towards sleep paralysis and other sleep disorders. Comprehensive surveys can drive the attention of the public towards the seriousness of sleep disorders and can eventually help in the understanding of this disease. The role of herbal teas in facilitating the reduction of sleep disorders, as reviewed in this article can suggest improved clinical results and health conditions.

Keywords

Sleep Disorders, Herbal Teas, Insomnia, Herbal Remedies, Sleep Paralysis.

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INTRODUCTION

Sleep is an important natural cognitive function improving physical health and the quality of life¹. Any kind of disruption will result in disease and unhealthy life. With insomnia being the most common, other sleep disorders

include obstructive sleep apnea, parasomnia, narcolepsy, and restless legs syndrome. Problems with sleep can indicate several mental health conditions². About one-third of adult's report insomnia symptoms, 6–10% have symptoms severe enough to meet the diagnostic criteria for insomnia disorder. 40–50% of people who experience

sleep deprivation report it persists for at least three evenings per week for a considerable amount of time³.

Insomnia

A sleeping problem called insomnia makes it difficult to both fall and remain asleep, which maybe intense and persistent. An intense sleep disturbance might last anywhere from one night to two weeks⁴.

Narcolepsy

Narcolepsy often categorized as excessive daytime sleepiness or irregular sleep-wake, is an autoimmune chronic disorder targeting orexin or hypocretin neurons located at the lateral side of hypothalamus⁵, thus a disabling neurologic disease that progresses if the symptoms of sleep paralysis are left untreated. The symptoms resulting with other disorders, including sleep apnea, attention-deficit hyperactivity disorder (ADHD), depression, anxiety, insomnia, also contribute to developing narcolepsy. Therefore, the diagnosis and adequate treatment with pharmacologic and non-pharmacologic by implementing behavioral interventions as therapies of sleep paralysis are essential to prevent the further progression of the disease into narcolepsy⁶.

Sleep Paralysis (SP)

A person who has sleep paralysis feels awake yet unable to move. It happens when a person transitions from sleep to insomnia. You might not be able to move or talk for a few seconds to many minutes throughout these changes. Some folks could also experience choking or pressure⁷. In the past, the terms "nightmare" and "SP" linked to a variety of factors, including superstitions, culture, and wisdom⁸. A person being conscious and awake during paralytic episode makes sleep paralysis different from dreaming and nightmares⁹.

People with SP reported feeling immobilized, speechless, powerless, and intense panic and anxiety attacks temporarily¹⁰, usually terminating when the sufferers roll off the bed, regain control, or are startled awake¹¹. Linked to wakefulness and posttraumatic stress disorder¹², bipolar disorder, schizophrenia¹³, its origin continues to be under study by researchers and physicians¹⁴.

Causes of Sleep Paralysis

Along with other sleep disorders, episodes of SP are also associated with a general lack of sleep, sleep disturbances,

jet lag, student status, and shift work¹⁵, or due to developing post-traumatic stress disorder and panic attacks resulting from some stressful events¹⁶. Medically, the rem stage of sleep is usually the point at which the person is said to be having a dream with no form of movement or muscular activity, since our brain is paralyzed temporarily by inhibiting the motor neurons located in the spinal cord¹⁷. PTSD can also increase the symptomatic episodes of sleep paralysis by disturbing the REM stage. Moreover, a person's behavior and personality such as being socially disconnected, creating delusions and believing in supernatural figures, all have been shown to have a connection with SP¹⁸.

Neurological disorders such as Parkinson's disease or psychological disorders such as Intellectual Disability and autism can also be an underlying cause for their effect of sleep disturbances on the brain¹⁹.

Types of Sleep Paralysis

Sleep paralysis comes in two varieties:

Paralysis from insulated sleep: When sleep palsy is the only indication of sleep disorders, it is considered insulated²⁰. Multiple episodes of sleep paralysis occur over time in intermittent sleep paralysis. There is a connection between awake and intermittent sleep palsy. Both kinds of sleep palsies frequently coexist. You could see intermittent isolated sleep palsy (RISP) in this situation. RISP refers to persistent instances of sleep palsy that are not connected to waking²¹.

Symptoms of Sleep Paralysis

The inability to move or talk is known as atonia, and it is the hallmark sign of sleep palsy. It is believed that in seventy-five cases of sleep paralysis, there are additionally different visions from ordinary dreams²².

Postural atonia is due to the inhibition of skeletal muscle movement due to a lack of responsiveness from pons and VM [ventromedial medulla], caused by the inhibitory action of GABA and Glycine on motor neurons in the spinal cord²³.

Sleep Paralysis and Hallucination

The hallucinatory aspects of sleep paralysis may be caused by REM-induced dream mentation, however, the visuals linked to sleep paralysis in dreams and sleep are significantly dissimilar. Just 30% of dreams are seen as terrifying, yet 90% of sleep paralysis episodes are linked to

some level of dread²⁴ and feature more aggressive "characters," and frequently entail attacks on the "dreamer,"²⁵. About 10% of people with SP state that their episode results in clinically severe disconformity, and about 7% report that their disease has an impact on other areas of their lives²⁶.

Traditional History of Sleep Paralysis

Historically, sleep paralysis has been associated widely with demons, and spirits and connected with supernatural existence. Researchers disagree with the spiritual belief but identify the symptoms to explain differences in feelings and hallucinations along with the fact that experiences are shaped by cultural beliefs and so have consequently shaped the idea of herbal remedies²⁷. Herbal Tea consumption dates back to ancient times in Chinese tradition and the use of herbal teas might be the first Chinese herbal medicine during ancient times. The species from the family Fabaceae, Labiatae and Compositae were commonly used²⁸. In Unani and Ayurvedic, *V. odorata* Linn from the family violaceae has been used traditionally because of its sedative properties²⁹.

Is Sleep Paralysis Common?

It is remarkable how common sleep paralysis is in both its prevalence and universality, even affecting persons who sleep regularly. There are cases of sleep paralysis in both sexes. A lifetime prevalence rate derived from 35 studies combined indicates that 8% of the general population, 28% of students, and 32% of mental patients have experienced at least one episode of sleep paralysis. 15–45% of individuals who have had sleep paralysis at some time in their lives may meet the diagnostic criteria for recurrent isolated sleep paralysis, even though the incidence of recurrent sleep paralysis is unclear. In surveys conducted in Canada, China, England, Japan, and Nigeria, between 20% and 60% of participants claimed to have had sleep paralysis at least once in their lifetimes. Roughly 36% of the overall population has isolated sleep paralysis at some point between the ages of 25 and above. Isolated sleep paralysis is a common diagnosis for narcolepsy patients that affects between 30 and 50% of those who have been diagnosed³⁰.

Treatment of Sleep Paralysis

Although there are no known cures for sleep paralysis, the majority of those who experience it often report that focusing on little movements of the body, such as moving one finger at a time, speeds up the healing process³¹.

Establishing a peaceful routine before bed will help you feel more at ease and ease³². Select the mattress and pillow that best suit your needs³³. Design your bedroom such that there is minimal light or noise interference. Restrict your alcohol and caffeine consumption, especially at night. The use of herbal treatments is growing overall as a result of advancements in administration and manufacturing. Many patients with sleeping difficulties find that medicinal herbs are an intriguing alternative to conventional pharmaceuticals, especially if they are reluctant to use regular prescriptions and when mainstream medication is unable to effectively treat chronic conditions without causing unfavorable side effects³⁴.

METHODOLOGY

The research is predicated on an examination of many literature sources that address sleep problems and the application of herbal teas as a treatment. Compiling the outcomes and conclusions from several research is the process of doing a systematic review. Data was gathered using various keywords to conduct the quantitative data analysis. In the process, 57 publications about sleep disorders, sleep paralysis, insomnia, narcolepsy, and use of herbal teas to treat these conditions were examined. Additionally, the components and active ingredients of the herbs that qualify them for use as a therapeutic source to lessen the consequences of sleep problems are covered³⁵.

Although the cognitive and neurobehavioral process is amply documented with authoritative sources, there is an insufficient deficit of knowledge on the occurrence, causes development and symptoms of sleep paralysis. This gap can often lead to incorrect diagnosis and treatments and will result in developing ineffective strategies to overcome sleep paralysis. There is a requirement for thorough and closer examination to understand the proper mechanism of sleep paralysis and analyze its symptoms to achieve clearer clinical evidence. Moreover, authenticated and demonstrated surveys and questionnaires are essential to increase awareness among the community and extract valuable data necessary to make informed decisions and identify gaps³⁶.

The criteria of the common factor for the herb selection involves the disorder basis which includes the pharmacological action on sleep disorders and the use of these herbs available globally for alleviating the symptoms of the sleep disorder, taken by patients with prescription, OTC (over the counter) as well as home remedies.

RESULT AND DISCUSSION

Viola odorata L.

Viola odorata L., also known as sweet violet, is a member of the family Violaceae. Sedative and hypnotic effects in animals or humans were identified and discovered to be present in *V. odorata*. and ever since, it has been employed to treat insomnia, cough, fever, common cold, and headache. It can fix cerebral pains, calm the sensory system and provide relaxation. The constituents of *Viola odorata* include nitrogenous organic compounds i.e., alkaloids, glycosides, saponins, methyl salicylate, mucilage, and vitamin C. Moreover, linalool is one of the major essential oils of *V. Odorata* that holds a hypnotic effect via inhalation in certain animal models³⁷.

Eleutherococcus senticosus

Widely known as Siberian ginseng, are believed to develop resistance against stressful conditions and make an individual's body adaptive. Clinically, Ginseng has been used for the remedy of sleeplessness and wakefulness³⁸.

Matricaria recutita

It is also known as chamomile and is consumed as an after-supper drink. It is additionally utilized as a gentle narcotic as well as a relaxing and calming agent in baths for sleep deprivation. Chamomile has a place with the family Compositae, which likewise contains chrysanthemums, asters and ragweed and may cause a cross-allergic reaction in patients who are allergic to these plants³⁹.

Table 1. Herbal Constituents and Plant Parts Utilized in Herbal Teas.

| Herbs | Active Constituents | Plant Parts |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------|
| <i>Viola odorata L.</i> | Linalool | Petals |
| <i>Eleutherococcus senticosus</i> | ginseng oils and phytosterol | Roots |
| <i>Matricaria recutita</i> | Essential oils, bisoprolol, matricin, chamazulene (terpenes), luteolin, rutin, and apigenin (flavonoids) | Petals |
| <i>Humulus lupulus</i> | Volatile constituents: Caryophyllene, humulene, and β -myrcene | Petals |
| <i>Piper methysticum</i> | Kavalactones | Petals |
| <i>Urtica dioica</i> | Arachidic acid, arachidonic acid, behenic acid | Leaf and Stems |
| <i>Passiflora incarnate</i> | chrysin, vitexin, coumarin, umbelliferon | Petals, stems, leaves |
| <i>Valeriana officinalis</i> | valepotriates, valerenic acid | Roots |
| <i>Melissa officinalis</i> | volatile compounds (geranial, neral, citronellal and geraniol), lemon-fennel tea | Petals |
| <i>Lavandula angustifolia</i> | Essential oil i.e., linalool, linalyl acetate, 1,8-cineole, β -ocimene, terpinen-4-ol, and camphor. | Buds, Petals |
| <i>Nepeta cataria</i> | Nepetalactone | Dried leaves, whitepetals |
| <i>Tilia species</i> | volatile oils i.e., citral, citronellal, citronellol, eugenol and limolene | Petals |
| <i>Anemone pulsatilla</i> | alkaloids, vitamins, essential oils | Leaf |
| <i>Myristica fragrance</i> | Myristicin, Myristic acid, Elemici, Safrole, Eugenol, Palmitic acid, Oleic acid, Alpha-pinene, Beta-pinene. | Seeds |
| <i>Centella asiatica</i> | saponin glycosides, asiaticoside | Leaf |
| <i>Rosemary (Rosmarinus officinalis L.)</i> | carosol, ursolic acid, betulinic acid and 1,8-cineole | Petals |
| <i>Gelsemium sempervirens L.</i> | Gelsemium | Roots |

Humulus lupulus

Hops are sedative and depressant for CNS and utilized for uneasiness and sleep problems. It is likewise utilized for profound pressure because of its soothing impact on the vagal nerve of the heart. Hops tea is widely used for insomnia, especially when associated with anxiety and irritability⁴⁰.

Piper methysticum

It is considered a gentle narcotic and is often utilized as an anxiolytic (lessen nervousness). By blocking the L-type calcium channels and sodium channels, they induce a sense of relaxation in an individual⁴¹.

Urtica dioica

In Europe, *Urtica dioica* is used as a remedy for detoxification and as a mild tonic stimulant. It is generally utilized in the treatment of unfavorably susceptible rhinitis i.e., roughage fever and before sleeping to further develop nasal breathing⁴².

Passiflora incarnata

Passiflora incarnata, also known as the Passion flower, is a mild CNS sedative taken with other spices, for example, valerian and hawthorn for nervousness and restlessness⁴³.

Valeriana officinalis

It is an enduring spice tracked down in North America, Europe and Asia. It is mostly sold as a sleeping aid in the United States, but it is also used for restlessness, tremors, and anxiety in Europe. The essential oils i.e., valerenic acid, valenol, valepotriates constitutes the plant's active ingredients⁴⁴.

Melissa officinalis

It is a mix of lemon salve and fennel as a famous narcotic tea and treats melancholy, tension, stress, and a sleeping disorder⁴⁵.

Lavandula angustifolia

Lavandula angustifolia has been used as a sedative with no hypnotic effects, especially in herbal sleep pillows and massage oils. The flowers were extracted in water⁴⁶.

Nepeta cataria

Nepeta cataria because of the sedative effect produced by its major component i.e., a volatile oil, Nepetalactone, is widely acknowledged for its effects on cats; catnip produces neuro-excitatory effects in felines. Furthermore,

reducing nervousness and irritability, promoting relaxation, and a sleeping aid, have been considered as their traditional uses⁴⁷.

Tilia species

Tilia sp is a well-known narcotic among Latin American societies, due to its volatile oils i.e., citral, citronellal, citronellol, eugenol and limolene⁴⁸.

Anemone pulsatilla

Anemone pulsatilla is a perpetual plant in the Ranunculaceae or buttercup family. The roots have been used for quite a long time as both natural and homoeopathic arrangements for profound pain (e.g., state of mind swings, crabbiness, unexpected eruptions as well as hyper-reactivity)⁴⁹.

Myristica fragrant

The pain relieving, rest drawing out and anxiogenic impact of *Myristica fragrance* makes it one of the well-known rest-actuating herbal medicines⁵⁰.

Centella Asiatica

Centella asiatica is a psychoactive herb has anti-inflammatory, rejuvenating, antioxidant, anxiety-reducing, and stress-relieving properties⁵¹.

Rosmarinus officinalis L.

Rosemary is a perineal shaggy bush which grows along the Cost of the Mediterranean, as well as in the regions of Sub-Himalaya. In traditional medicine, it has been used to treat intercostal neuralgia, headaches, migraines, insomnia, emotional upset, depression, and as a mild analgesic. It shows significant clinical impacts on the state of mind, learning, memory, torment, tension, and rest⁵².

Gelsemium sempervirens L.

Among restorative plants, *Gelsemium sempervirens L.* from the family Loganiaceae, has been suggested for alleviation of uneasiness due to the anxiolytic impacts of different concentrates of the roots and rhizomes of *G. Sempervirens*⁵³. Detail of plant parts used in herbal teas are provided in Table 1.

Valerian-Hops mix

A blend of valerian and *Humulus lupulus* is considered an administration procedure for treating a sleeping disorder, the *valerian-hops* mix was essentially unrivaled for

diminishing rest dormancy and broadening slow-wave rest length in patients with essential sleep deprivation⁵⁴.

Regardless of the potential health benefits of herbal teas, various curtailments limit their desired effect. Such as with *Valerian and Hops*, most commonly, drug interactions have been reported by people using herbal teas during sleep paralysis treatment with sedatives like benzodiazepines, often resulting in drowsiness, headaches, gastrointestinal irritations lasting temporarily, however, one should refer to their physicians before the use of *Valerian*⁵⁵. Cross-reactivity such as between *Matricaria recutita* (chamomile) and certain members from the Asteraceae family is another limitation reported. Moreover, further research and clinical trials are required to support and confirm these limitations for herbal teas⁵⁶. The use of Kava for treating sleep-related disorders, several cases of hepatotoxicity have been reported. Most of these complications are associated with chronic excessive utilization as well as individual risk factors such as a person having a liver injury before the Kava intake or alcoholism⁵⁷.

CONCLUSION

In present times, the use of herbal medicines and teas has become a widely used remedy and treatment to relieve anxiety and calm the mind during stressful conditions. Thus, herbal teas are considered to have a positive effect on various sleeping disorders, although more comprehensive research and clinical testing are required in future.

CONFLICT OF INTEREST

There is no conflict of interest.

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