

SHIRO ABHYANGA IN PSYCHOSOMATIC DISORDERS: A PRISMA-GUIDED INTEGRATIVE NARRATIVE OF CLASSICAL AYURVEDIC CONCEPTS AND CONTEMPORARY EVIDENCE

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ABSTRACT

Background: Shiro Abhyanga is a traditional Ayurvedic head massage practiced for centuries. It addresses mind – body disturbances such as anxiety, insomnia, headache, and stress-related disorders. Ayurveda classifies these *Vata*-predominant *Manasika* and psychosomatic disorders. Recent scientific studies now explore its clinical efficacy and physiological effects, offering a modern perspective on this ancient healing practice. Shiroabhyanga is thought to balance the doshas, especially *Vata* and *Pitta*, and to relieve various conditions like headaches, stress, insomnia, and sensory organ disorders. Its holistic method not only treats physical problems but also boosts mental well being, making it a cherished practice in Ayurveda for centuries. **Objective:** To integrate traditional Ayurvedic indications with current scientific findings on the role of Shiro Abhyanga in psychosomatic disorders **Methods:**

A narrative evidence synthesis of classical Ayurvedic texts, clinical studies, experimental research, case series, and pilot trials examining *Shiro Abhyanga* and related head therapies. Evidence was compiled on subjective outcomes (stress, anxiety, sleep), physiological markers (HRV, EEG), and classical rationales. **Results:** Classical Ayurvedic texts describe *Shiro Abhyanga* as a *MajjaSarakara*, *Vatahara*, *Manobalakara*, and *Nidrajanana* therapy. Modern studies report reductions in perceived stress, anxiety levels, and improvements in sleep quality. Physiological studies demonstrate enhanced parasympathetic activity, improved HRV

indices, and EEG patterns consistent with relaxation. Evidence remains promising but is limited by small sample sizes and methodological variability. **Conclusion:** *Shiro Abhyanga* aligns strongly with classical *Ayurvedic* principles for psychosomatic disorders and shows supportive modern evidence for stress reduction, improved sleep, and neurophysiological balance. Larger randomized trials are needed to strengthen clinical recommendations.

KEYWORDS: Shiro Abhyanga, Ayurveda, Psychosomatic Disorders, Manovaha Srotas, Vata Pradhana Vyadhi, Snehana Therapy, Murdhni Taila, mode of action.

INTRODUCTION

Murdhni taila / Murdha taila is a procedure of conducting treatments on the head using herbal oils such that the oil remains in contact with the scalp for a fixed duration of time. This contact period of oil on the scalp is necessary for to get its benefits. *Murdhni Taila* is also practiced as a part of *Dinacharya* (daily regimen). *Ayurveda* considers the human body as an inverted tree where in the roots are at the top and the branches pointing downwards.

Psychosomatic disorders represent a complex interplay between psychological stress and bodily symptoms. Conditions such as insomnia, anxiety, tension headaches, fatigue, and somatoform presentations are increasingly common in modern life. *Ayurveda* describes similar states under *Manasika Vikara*, *Vata aggravation*, and stress-linked dysfunctions of *Indriya* and *Manovaha Srotas*.

Shiro Abhyanga

Shiroabhyanga is most commonly indicated and extensively applied treatment procedure amongst *bahirparimarjin chikitsa*.

Therapeutic massage of the head, neck, and shoulders with medicated oils—is a classical therapy mentioned in texts like *Ashtanga Hridaya* and *Charaka Samhita*. It is described as:

1. *Vatahara* (pacifying Vata)
2. *Nidrajanana* (promoting sleep)
3. *Manobalakara* (strengthening the mind)
4. *Shiro-Roga Nashaka* (beneficial for head-related disorders).
5. *Shramhara*

These indications suggest its relevance to psychosomatic conditions where *Vata* imbalance and mental stress coexist.

METHODS

This narrative evidence synthesis was carried out to merge classical *Ayurvedic* indications for *Shiro Abhyanga* with current scientific research regarding its relevance to psychosomatic disorders.

Table 1: Shiroabhyanga Classical Indications.

Sr No.	Indications	Textual References
1.	Keshya	A.H 3
2.	Daaha	A.H.Chi 131, 132 /1
3.	Nasagata raktastrav	A.H.Chi 49/2
4.	Ardita	A.H.Chi 43/21
5.	Rouksha	A.H.SU 23-25/22
6.	Visama jwara Asrugdara	C.S.CI 318/3
7.	Punaravartak jwara	C.S.CI 341\3
8.	Pittaj jwara Raktapitta	C.S.CI 91\4
9.	Rajayakshma	Yogamruta jwara 5
10.	Kashta kasa	C.S.Ci 139/18
11.	Kusta associated with daah	C.S.Ci 133/7

Table 2: Therapeutic Actions of Shiro Abhyanga with Classical References.

Therapeutic Action	Classical Description	Classical Reference	Interpretation in Psychosomatic Context
Promotes sleep (<i>Nidrajanana</i>)	Regular oil massage of the head induces sound sleep and relieves insomnia.	Ashtanga Hridaya Sutrasthana 2/8	Helps regulate sleep cycle and may reduce insomnia and stress-related sleep disturbances.
Pacifies <i>Vata Dosha</i>	Oil application to the head alleviates aggravated <i>Vata</i> , which is responsible for many neurological and psychosomatic disorders.	Charaka Samhita Sutrasthana 5/81	Calms nervous system activity and reduces anxiety, restlessness, and mental tension.
Nourishes sensory organs (<i>Indriya Prasadana</i>)	Head oil therapies nourish sense organs and improve clarity of perception.	Sushruta Samhita Chikitsasthana 24/25	Supports cognitive functions and sensory relaxation.
Strengthens hair and scalp	Regular Shiro Abhyanga strengthens hair roots and prevents hair fall and premature greying.	Ashtanga Hridaya Sutrasthana 2/8–9	Improves scalp circulation and tissue nourishment.
Relieves headache (<i>Shirahshoola</i>)	Head oil massage alleviates pain and heaviness in the head.	Charaka Samhita Sutrasthana 5/82	May help reduce tension-type headaches and stress-related head pain.
Enhances mental stability (<i>Manas</i>)	Oil therapies to the head promote calmness and	Ashtanga Hridaya Sutrasthana 22/23	Supports stress reduction and

Prasādana)	emotional balance.		emotional regulation.
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Table 3: Non-Classical References Of Shiroabhyanga.

Author & Year	Study Design / Sample	Intervention	Outcome Measures	Key Findings
Kulkarni & Dharmadhikari (2011)	Pilot clinical study; n=30 patients with stress-induced headaches	Shiro Abhyanga with medicated oil for 14 days	Headache intensity, stress score	Significant reduction in headache frequency & stress-related symptoms; improvement in sleep reported.
Sreelatha & Ramesh (2018)	Clinical study; n=40 patients with insomnia (Anidra)	Shiro Abhyanga (30 min daily × 14 days)	PSQI, sleep onset latency, subjective sleep quality	Improved sleep duration, reduced nighttime awakenings; marked improvement in PSQI scores.
Nampoothiri & Prakash (2017)	Comparative clinical study; n=45 with stress-related disorders	Shiro Abhyanga with different oils (Ksheerabala, Narayana, Brahmi)	Perceived stress scale, anxiety score	All oils effective; Brahmi oil showed greatest anxiolytic effect.
Basler (2011) – Abhyanga	Pilot exploratory study; n=20 healthy adults	Full-body Abhyanga including head region	Subjective stress scale, mood profile	Significant reduction in stress & improved emotional relaxation after single session.
Reddy & Shankar (2015)	Autonomic function test; n=28 volunteers	Oil application on scalp & head massage	Heart rate, BP, ANS reactivity	Reduction in sympathetic reactivity; mild decrease in BP; improved relaxation markers.
Kessler et al. (2013)	Systematic review	Ayurvedic therapies for mental health	Anxiety, stress, insomnia outcomes	Moderate evidence for head-oil therapies; mechanisms linked to autonomic modulation & sensory pathways.

MODE OF ACTION OF SHIROABHYANGA**Ayurved Aspect**

In Ayurveda, *Shiro Abhyanga* (oil massage of the head) primarily calms *Vata Dosha* which influences neurological and psychological functions. The head (*Shira*) is considered the seat of *Prana*, *Indriya* (sense organs), and *Manas* (mind); treatments applied to this area directly impacts mental and neurological health. Classical texts like *Charaka Samhita* state that oil application reduces aggravated *Vata* and helps stabilise the nervous system.

The *Snigdha* (unctuous) and *Mridu* (softening) properties of medicated oils nourish scalp tissues and sensory organs, enhancing *Indriya Prasadana* (clarity of senses). Regular head massage is also described to promote *Nidra* (sleep) and mental calmness in *Ashtanga Hridaya*. According to *Sushruta Samhita*, therapies applied to the head nourish the sensory organs and support cognitive functions. Thus, *Shiro Abhyanga* helps regulate *Prana Vayu*, calm the mind, and restore psychosomatic balance.

According to Sneha Guna

1. **Snigdha** – *Snigdha guna* acts as *Vatahara*, *Kaphakara*, and *Vrishya*. Which does *Snehana* at the cellular level of the body.
2. **Guru** – According to *Bhavprakash* *Guru guna* is *Vatahara*, *Kaphakara*, *Pushtikara*. Which alleviates the morbid *Vata*, increases *kapha*, and nourishes the body.
3. **Sheeta** - It helps to keep the mind healthy by increasing pleasure and enthusiasm. It prevents fainting and decreases perspiration.
4. **Mrudu** – With the help of this *guna* *abhyanga* reduces stiffness.
5. **Drava** – by this *guna* drug propagates all over the area very easily.
6. **Picchila guna** – it means slimy. This *guna* produces longevity and increases body strength. It increases decreased *Kapha*.
7. **Sara guna** – The meaning of *sara* is mobility. This property mobilizes *Doshas* and *Malas*.
8. **Manda guna** – It means dullness. The drug diffuses slowly and remains in the contact of *doshas* and *malas* for longer time.
9. **Sukshma Guna**- *Sukshma guna* means fineness and minuteness, and it helps the drug to enter into the micro channel.

Modern Aspect

1. **Generation of Osmotic and Hydrostatic Pressure:** During *Abhyanga*, the mechanical pressure and rhythmic strokes applied on the skin create osmotic and hydrostatic pressure within the extracellular compartments of the skin.
2. **Improvement in Blood Circulation:** The pressure generated during massage increases local blood circulation and promotes pooling of blood toward the massaged area, enhancing tissue perfusion.
3. **Transdermal Absorption of Medicated Oils:** Increased circulation and skin permeability facilitate the absorption of medicated oil or ghee used in *Abhyanga*. Lipid-soluble phytonutrients present in these formulations may passively diffuse through the skin and enter systemic circulation, reaching target tissues.
4. **Stimulation of Lymphatic Drainage:** *Abhyanga* promotes lymphatic flow through mechanical compression and relaxation of lymphatic vessels, aiding in the drainage of interstitial fluids and metabolic waste products.
5. **Increase in Tryptophan Levels:** Massage may increase the concentration of amino acids such as tryptophan in the blood, which serves as a precursor for the synthesis of the neurotransmitter serotonin.
6. **Serotonin Production and Relaxation:** Increased serotonin production contributes to improved mood, relaxation, and the calming effects observed after massage therapy.
7. **Generation of Neural Action Potentials:** Friction and pressure applied during massage stimulate peripheral nerves, generating action potentials that may enhance neurotransmitter activity.
8. **Acetylcholine Release:** Neural stimulation during massage may increase acetylcholine release at neuromuscular junctions, which contributes to improved neuromuscular coordination and relaxation.
9. **Role of Lipid-Rich Myelinated Nerve Fibers:** Myelinated nerve fibers contain lipid-rich sheaths, and the interaction between mechanical stimulation and these structures may enhance nerve conduction and sensory response.
10. **Overall Calming Effect:** The combined effects of neurotransmitter release, improved circulation, and neural stimulation contribute to the pleasant and calming sensations experienced during and after *Abhyanga*.

DISCUSSION

The findings of the present review suggest that Shiro Abhyanga may exert beneficial effects in psychosomatic disorders through both traditional and modern mechanisms.

From an Ayurvedic perspective, psychosomatic disorders are primarily associated with Vata imbalance and disturbances in Manas. Shiro Abhyanga, through its Vata-pacifying and mind-calming properties, addresses the underlying pathophysiology described in classical texts.

From a biomedical standpoint, the observed improvements in autonomic parameters indicate that Shiro Abhyanga may modulate the autonomic nervous system. The shift toward parasympathetic dominance is particularly relevant in stress-related conditions, as it is associated with relaxation, improved sleep, and reduced physiological arousal.

Mechanistic Insights and Integrative Perspective

The therapeutic effects of Shiro Abhyanga may be mediated through modulation of the neuro-endocrine-autonomic axis. Mechanical stimulation of scalp mechanoreceptors during massage may activate neural pathways associated with relaxation responses, the application of medicated oils may facilitate transdermal absorption of bioactive compounds.

Improved heart rate variability and reduced sympathetic overactivity observed in several studies suggest enhanced parasympathetic activity. This autonomic shift may contribute to reduced stress levels and improved sleep quality. Furthermore, potential modulation of neurochemical pathways, including serotonin and cortisol regulation may play a role in the observed clinical benefits.

These mechanisms provide a plausible scientific basis that aligns with Ayurvedic concepts such as Vata Shamana and Manas Prasadana, thereby supporting an integrative understanding of Shiro Abhyanga.

FUTURE DIRECTIONS

Future research should focus on:

1. Standardization of Shiro Abhyanga techniques
2. Large-scale randomized controlled trials
3. Objective assessment using biomarkers such as HRV and cortisol comparative studies with other therapeutic modalities

CONCLUSION

The available evidence suggests that Shiro Abhyanga may have a beneficial role as an adjunctive intervention in the management of psychosomatic disorders. Both classical Ayurvedic descriptions and contemporary scientific findings support its therapeutic potential. However, further high-quality, well-designed randomized controlled trials are required to establish standardized treatment protocols and strengthen the evidence base for its integration into mainstream clinical practice.

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