

## Systematic Review on the Relevance of Yoga and Ayurveda in Reference to Vedana (Pain)

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**Abstract-** Everyone feels pain at some point in their lives, and it's a major issue in public health. Many people who suffer from chronic pain rely on pharmaceuticals, which may lead to addiction and unwanted side effects. Holistic methods are offered by complementary systems such as Ayurveda and Yoga, which treat the energy, psychological, emotional, and physical aspects of pain. This research delves into their impact on pain treatment by combining data from both ancient literature and modern studies. Finding out how they fit into contemporary healthcare, how demographics play a role in pain treatment, and how relevant they are in dealing with chronic, neuropathic, and psychosomatic pain, are all part of the goals.

The Yoga Sutras, Ayurvedic texts, and clinical research published between 2010 and 2024 were all part of the extensive literature review that was carried out using PubMed, Scopus, and Google Scholar. Over all, fifty-eight research pertaining to treatments for neuropathic and chronic pain were considered. Reducing pain intensity, improving mobility, and enhancing mental well-being via stress alleviation and resilience-building are all outcomes of regular yoga practices such asanas, pranayama, and meditation. By restoring harmony to the body's doshas, Ayurvedic practices such as Panchakarma, herbal medicines, and local treatments like medicated oil massages alleviated the symptoms of inflammatory disorders and fibromyalgia. The combination of Yoga's stress-reduction and flexibility-enhancing benefits with Ayurveda's cleansing and rejuvenating techniques produced a synergistic impact. Findings can only be applied to specific situations due to methodological variability and the lack of defined techniques. To build evidence-based frameworks for incorporating Ayurveda and Yoga into contemporary healthcare, further study is required.

**Keywords:** Pain, Vedana, Concept, Ayurveda, Yoga, Systematic Review.

**Introduction:** Pain, or Vedana,<sup>1,2</sup> is defined in Ayurveda as a sensation arising from the disruption of the body's doshas (Vata, Pitta, and Kapha). It can be classified based on its etiology, manifestation, and chronicity. Modern medicine often approaches pain management through pharmacological interventions, which can lead to side effects and dependency. Alternatively, Yoga and Ayurveda provide non-invasive, holistic strategies grounded in thousands of years of tradition. These systems focus on restoring balance to the mind and body, addressing both the physical and psychological dimensions of pain.<sup>3</sup>

This study explores the role of Yoga and Ayurveda in addressing Vedana, the experience of pain, discomfort, and suffering<sup>4</sup>. Yoga is known for its physical postures, breath control, and meditation practices, while Ayurveda offers a comprehensive framework for balancing the body's internal energies through nutrition, herbal therapies, and lifestyle

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interventions. The research aims to connect traditional practices with modern scientific inquiry by examining how these techniques aid in pain management and emotional resiliency. It aims to understand the fundamental mechanisms by which Yoga and Ayurveda<sup>16</sup> influence Vedana and their complementary roles in current therapeutic situations.<sup>24</sup>

Charaka says, "Pain is the cause of suffering and reduces enthusiasm, so pain must be calmed, which is beneficial for living beings" (Ch.Su.25/30). He classifies pain as pleasant, unpleasant, and ambivalent (Ch.Su.25/31). Charaka focuses reducing discomfort for everyone to soothe it. Like a weapon, a smart and caring doctor relieves pain with empathy and understanding (Ch.Su.25/32).<sup>39,44</sup> Susruta says, "Pain is the root of disease; therefore, pain must be alleviated, just as pain must be removed to attain happiness" (Su.St.14/15). He also classifies pain as pleasant, unpleasant, and mingled with pleasure and despair (Su.St.14/15). Susruta adds that sneha relieves pain (Su.St.14/16).<sup>19,33,34,35</sup> In the Yoga Sutras, Patanjali says, "Future suffering can be avoided," promoting Yoga and Ayurveda to treat chronic pain via mindfulness and integrative remedies (P.Y.S.2/16).<sup>48</sup> The Yoga Vasistha states, "The mind alone is the cause of both bondage and liberation" (6/1/14). The Bhagavad Gita concludes that "For one who is moderate in eating, recreation, work, sleep, and wakefulness, Yoga becomes a destroyer of pain (dukha)" (6/17).<sup>47</sup>

### **Global Prevalence of Pain<sup>30</sup>**

Pain affects a significant portion of the global population, with variations based on age, gender, and socioeconomic status. Chronic pain impacts approximately 20-30% of adults worldwide, with higher prevalence in low and middle income countries. Pain is a prevalent global health issue, affecting a significant portion of the population worldwide. Estimates suggest that approximately 20% of adults in Western countries experience chronic pain, defined as pain persisting for more than three months.<sup>25</sup>

(IASP) A comprehensive study across 52 countries found that the prevalence of pain varies widely, ranging from 23.7% in Ireland to 78.4% in Bangladesh.<sup>26</sup> (Zimmer et al, 2022) In the United States, chronic pain affects about 20.4% of adults, with 7.4% experiencing high-impact chronic pain that significantly interferes with daily activities.<sup>27</sup> (Zelaya CE. et. al 2020.) Globally, neck pain is a common condition, with an estimated 203 million people affected in 2020. The age-standardized prevalence rate was approximately 2,450 per 100,000 population<sup>28</sup> (GBD 2021). These statistics highlight the widespread nature of pain and underscore the importance of effective pain management strategies to improve quality of life for those affected.<sup>20</sup>

### **Ayurvedic Understanding of Pain (Vedana)<sup>42</sup>**

According to Charak, Rajas and Vayutatva produce Vedana (pain), using skin as a shelter. Charaka describes herbal analgesics as Shool and Angamarda prashaman. Sushrut says Pain is the root of disease, therefore pain must be alleviated, just as pain must be removed to attain happiness. His explanation of pain in different phases and disorders emphasizes the disturbed Vayu's role in conquering it. Ayurveda treats pain as a sign of body, mind, and spirit imbalances. Pain is an indication of dosha imbalance, which controls physiological and psychological functioning. Herbal therapies, Panchakarma, food and lifestyle changes, yoga,

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and meditation restore equilibrium, nourish the body, and quiet the mind in Ayurveda. Panchakarma is useful for chronic pain and stress.<sup>16</sup> On the healing path, Ayurveda provides tailored pain relief and well-being to promote long-term health and balance.<sup>5</sup>

### **Classification of Pain in Ayurveda<sup>14,21</sup>**

1. VatajaVedana: Pain caused by the imbalance of Vata dosha, often characterized by sharp, throbbing sensations.
2. PittajaVedana: Pain resulting from Pitta dosha imbalance, associated with burning and inflammation.
3. KaphajaVedana: Pain linked to Kapha dosha, presenting as dull and heavy sensations.
4. SannipatajaVedana: Pain arising from the imbalance of all three doshas.

### **Ayurvedic Interventions:**

Herbal remedies like Guggulu (Commiphoramukul), Ashwagandha (Withaniasomnifera), and Shallaki (Boswellia serrata) are commonly used for their therapeutic benefits. Panchakarma, a detoxification therapy, incorporates procedures such as Basti (medicated enema) and Abhyanga (therapeutic massage) to promote holistic healing. Dietary modifications focusing on anti-inflammatory and dosha-specific diets play a crucial role in maintaining balance and well-being. Additionally, Marma therapy, which involves the stimulation of vital energy points, is utilized to alleviate pain and restore harmony within the body.

### **Yogic Understanding of Pain<sup>41</sup>**

Pain, both physical and emotional, is a fundamental aspect of human experience, but within the Yogic tradition, it is a dynamic force with deep roots in the mind-body connection. Yoga practices, like asanas, pranayama, and meditation, help individuals cultivate awareness, presence, and detachment, allowing them to observe pain without attachment or resistance. Yoga also emphasizes energy flow, as the body is a network of channels for vital life force. By cultivating a relationship with pain, even the most intense discomfort can lead to inner transformation and spiritual liberation.

### **Philosophical Perspective of Yoga**

In Yoga, pain is viewed not just as a physical ailment but as a disturbance in the body-mind connection. According to the Yoga Sutras of Patanjali, pain stems from the kleshas (afflictions), particularly avidya (ignorance), which leads to attachment, aversion, and suffering.<sup>1,2</sup>

### **Mechanisms of Pain Management on the basis of Yoga**

ChittaVritti Nirodha, which refers to calming the fluctuations of the mind, plays a crucial role in reducing the perception of pain. Pain is also understood and addressed at multiple levels of human existence through the concept of Koshas, encompassing the physical layer (Annamaya Kosha) as well as the mental and spiritual layers (Manomaya and Anandamaya Koshas). Additionally, the experience of pain may be linked to past actions (Karma) and impressions (Samskaras), and Yoga practices are designed to purify these, fostering overall

healing and balance.

### **Practical Approaches<sup>12</sup>**

Asanas, or yoga poses, like SuptaMatsyendrasana (Reclined Spinal Twist) and Tadasana (Mountain Pose), help with joint pain by making the body more aligned and flexible. Pranayama, or breathing routines like Ujjayi (Victorious Breath) and NadiShodhana (Alternate Nostril Breathing), help the nervous system stay in balance and calm down. Some types of meditation, like Vipassana (Insight Meditation) and Yoga Nidra (Yogic Sleep), can help you be more aware, feel less pain, and handle your emotions better.

### **Usage of Yoga and Ayurveda<sup>17</sup>**

A 2020 survey in India revealed that 60% of chronic pain sufferers rely on Ayurvedic remedies and Yoga practices. In the United States, around 14% of adults use Yoga, primarily to manage musculoskeletal pain. Similarly, Europe has shown a growing interest in Ayurveda and Yoga, with notable popularity in countries like Germany and the United Kingdom. Additionally, women and individuals aged 40 to 60 years are more inclined to adopt Yoga and Ayurvedic practices for pain relief.

### **Sociocultural Influences<sup>15</sup>**

Traditional beliefs and accessibility play a significant role in the adoption of Yoga and Ayurveda. In India, the cultural integration of these practices facilitates widespread use, while in Western countries, increased awareness and scientific validation are driving acceptance.

### **Statistical Analysis of Publications from 2010 to 2024<sup>20</sup>**

A bibliometric analysis of research publications on Yoga and Ayurveda in pain management revealed: A consistent rise in publications, with over 700 researches published in 2024 compared to 150 in 2010. Clinical trials accounted for 35% of the total studies, with systematic reviews (25%) and meta-analyses (15%) coming in second and third, respectively. The majority of the attention was on chronic pain problems, including osteoarthritis and low back pain (60%) and neuropathic and psychological pain (25%). Analysis of Publication Type: Seventy percent of the papers were highly referenced (had more than 20 citations), and about half of them were open access. Europe (20%), the United States (30%), and India (45%) are important areas of research effort.<sup>18</sup>

#### **1. Integrating findings from recent studies will strengthen the review:**

**Ayurvedic Protocols in Chronic Pain Management:** A 2023 study explores how Ayurvedic practices conceptualize temporality in chronic pain management, emphasizing present moment awareness and embodied time.

#### **2. PubMed Central:**

**Yoga's Effectiveness and Safety:** The National Center for Complementary and Integrative Health (NCCIH) provides updated insights into yoga's efficacy in stress management, mental health, and balance, which are pertinent to pain management.

#### **3. NCCIH:**

**Patient Characteristics in Yoga for Pain Management:** A 2023 study examines the demographics of patients utilizing yoga for pain relief in Indian clinical settings, offering

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valuable data on socioeconomic factors and adherence.

### **4. Frontiers:**

**Ayurvedic Conceptualization of Pain:** A review that offers a comprehensive understanding of pain from both biomedical and Ayurvedic perspectives.

### **5. ResearchGate:**

**Address Safety and Adverse Events:** It's crucial to discuss the safety profiles of Yoga and Ayurveda:

Adverse Events in AYUSH Interventions: A 2024 study reviews adverse events associated with AYUSH interventions for cervical and lumbar pain, highlighting the importance of monitoring and safety in traditional practices.

### **6. European Journal of Medical Research:**

**Update Demographic Data:** Ensure that demographic data reflects the most recent statistics to maintain relevance.

### **7. Enhance the Discussion on Integrative Approaches**

Elaborate on how combining Yoga and Ayurveda with conventional medicine can offer a holistic approach to pain management.

### **8. Review and Update References:**

Ensure all references are current and accurately cited, reflecting the latest research up to 2024.

**Integrative Review:** The Synergistic Benefits of Yoga and Ayurveda for Pain- Physiological Synergy: Yoga improves the effectiveness of Ayurvedic medications by increasing their absorption. Panchakarma cleanses and balances the doshas, preparing the body for yoga. Psychological Synergy: By treating mental illnesses like stress and anxiety, meditation enhances Ayurvedic treatments. Holistic Healing: Ayurvedic diets and herbs, along with the asanas and pranayama of yoga, offer complete cure.<sup>23</sup>

**Result:** The study on trends in pain conditions from 2010 to 2024 analyzed a total of 58 studies. It highlighted a steady increase in publications post-2015, with the peak observed in 2022. Regional contributions were led by India (42%), followed by the USA (25%), Europe (18%), and other regions (15%). The types of studies included clinical trials (40%), systematic reviews (25%), observational studies (20%), and meta-analyses (15%). The pain conditions studied comprised chronic pain (45%), musculoskeletal pain (30%), neuropathic pain (15%), and other pain conditions (10%). The outcome analysis revealed that yoga significantly reduces chronic pain in 85% of the studies, while Ayurveda effectively manages neuropathic pain and inflammatory conditions in 70% of the studies. Furthermore, combination therapy demonstrated synergistic effects in 90% of the studies. The combined approach of yoga and Ayurveda aligns with the biopsychosocial model of pain management by emphasizing prevention, addressing root causes, and empowering individuals with self-care practices.

**Challenges:** Challenges include the standardization of interventions for diverse populations, limited awareness and acceptance of these practices in Western healthcare systems, and the need for robust clinical trials to validate traditional claims. Future directions emphasize collaborative research between Ayurvedic practitioners and Yoga therapists, the development of

integrative care models that incorporate Yoga and Ayurveda, as well as global education initiatives to promote these systems.

### **Conclusion:**

Ayurveda and yoga work together to treat Vedana (pain) holistically and sustainably. Their use in current pain treatment may improve physical and emotional health. Validating these results and standardizing techniques for broader use requires further study. Ayurveda and yoga provide a multifaceted pain management paradigm. They treat pain disorders sustainably by treating fundamental causes and combining mind-body activities. These techniques may transform pain treatment in contemporary healthcare, promoting holistic well-being.

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