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Efficacy of Ayurvedic treatments in Stress Management

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ABSTRACT

Stress is known as *Sahasa* in *Ayurveda*. Resulting *Ojah Ksaya* (loss of immunity), increases the body's susceptibility to various diseases. A person's lifestyle is a cumulative product and mimicries gained from his/her immediate companions, thus evolving into a well-coordinated initiation of psychological and innate control over physical and sensory activities. This can be monitored by taking adequate care of *Traya Upastambha*. According to *Ayurveda*, the amount of positive and negative stress is largely governed by three energies: *Vata, Pitta*, and *Kapha*. Depending on which one may have to deal with fear, anxiety, insomnia, isolation, etc. The ancient system of healing originating in India offers a holistic approach to managing stress by addressing the mind, body, and spirit as interconnected elements; it aims to restore balance and harmony. Through personalized diet, lifestyle recommendations, herbal remedies, and relaxation techniques, *Ayurveda* seeks to alleviate symptoms of stress effortlessly. This work is a compilation of Primary *Ayurvedic* literature and previous work to emphasize the role of *Ayurvedic* treatments in stress management.

Key words: Stress, Sahasa, Ojah Ksaya, Rasayana, Traya Upastambha.

INTRODUCTION

Globally, over 70% of people with mental illness receive no treatment due to factors like lack of knowledge, ignorance, prejudice, and fear of discrimination.

याति ब्रह्म यया नित्यमजरं शान्तमव्ययम।

विद्या सिद्धिर्मतिर्मेधा प्रज्ञा ज्ञानं च सा मता || Ca. Sh.5/19 ||

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In Ayurveda, it is said that a person with a clear conscience possesses pure wisdom which dispels the excessively thick darkness caused by ignorance, which brings about detachment and knowledge about the nature of all things which is conducive to the attainment of Yogic power, which renders an individual wise, which brings about freedom from vanity and detachment from the causative factors of miseries, which renders an individual free from hopes, which bring about renunciation and which serves as a means to attainment of Brahman, the eternal, immutable, tranguil, and indestructible. It is this wisdom that is known as Vidya (learning), Siddhi (accomplishment), Mati (wisdom), Medha (power of retention), Prajna (intellect), and Jnana (knowledge). An individual liability to stress is universal and continuous, but the incidence of stress depends upon stretching the stressor beyond the limits of endurance.

The modern student of stress may be tempted to read the three-fold aspects of Hans Selye's model of systemic stress here: alarm in *Sattva* (perceptions),

adaptation in Raja (performances), and exhaustion in Tamas (resistances). But the correspondence may not be more than superficial. A recent report by the Times of India (February 22, 2021) reveals that an alarming 82% of Indians are experiencing high levels of stress. The primary contributors to this stress epidemic are work-related pressure, life struggles, relationship issues, financial woes, and mental exhaustion, ultimately leading to anxiety, depression, and other related health concerns. Stress has become a silent pandemic, exacerbated by the COVID-19 crisis, which has introduced additional stressors such as fear of isolation, illness, and mortality, as well as job insecurity and disrupted education. The transition to virtual interactions has only added to the stress burden, and individuals' responses to stress and their natural coping mechanisms vary greatly. Therefore, a one-size-fits-all approach to stress management is not effective. Fortunately, India's ancient holistic healing system offers a comprehensive solution. Ayurvedic principles aim to synchronize the intricate relationships between mental, physical, and spiritual aspects, fostering a state of equilibrium and holistic wellness. By adopting Ayurvedic methods, individuals can develop resilience to stress through a range of holistic techniques, including Yoga, physical activity, mindful practices, balanced nutrition, and effective time management.

Gaudapada's interpretation of Samkhya-Karika categorizes stress into three distinct types, providing a framework for understanding its various manifestations:

- 1. *Adhyatmik* stress: originating from within, related to thoughts, emotions, and mental well-being.
- 2. Adhidaivik stress: resulting from external factors, such as environmental and societal influences.
- Adhibhautik stress: caused by physical and material factors, including health and financial concerns.

Gaudapada acknowledges that all stress is ultimately mental, but the source of the stressor determines its classification. He distinguishes between:

1. Purely psychological stresses (Mano-Matra-Janya)

2. Stresses with non-psychological sources (Amansa)

This framework highlights the importance of understanding the root cause of stress to develop effective coping strategies.

MATERIALS AND METHODS

Review of *Ayurvedic* literature, The classical texts of *Ayurveda*, along with their commentaries, other *Ayurvedic* texts and journals, and relevant websites, articles, and presentations were referred to.

Here are some previous work done that support the present study:

- Ashwagandha reduces cortisol levels: A 2012 study published in the Indian Journal of Psychological Medicine found that Ashwagandha supplementation reduced cortisol levels and improved stress tolerance in individuals with chronic stress.^[1]
- Yoga and Pranayama reduce stress: A 2018 systematic review published in the Journal of Clinical Psychology found that Yoga and Pranayama practices significantly reduced stress and anxiety in healthy individuals and those with anxiety disorders.^[2]
- 3. Ayurvedic massage therapy reduces stress: A 2019 study published in the Journal of Bodywork and Movement Therapies found that Abhyanga massage significantly reduced stress and improved mood in individuals with chronic stress.^[3]
- 4. Panchakarma detoxification reduces stress: A 2017 study published in the Journal of Ayurveda and Integrative Medicine found that Panchakarma treatment reduced stress and improved quality of life in individuals with chronic stress.^[4]
- 5. Ayurvedic herbal remedies reduce anxiety: A 2020 review published in the Journal of Ayurveda and Integrative Medicine found that Ayurvedic herbal remedies, including Brahmi and Ashwagandha, reduced anxiety and improved cognitive function in individuals with anxiety disorders. [5]
- 6. Ayurvedic diet reduces stress: A 2018 study published in the Journal of Ayurveda and Integrative Medicine found that an Ayurvedic diet

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significantly reduced stress and improved mood in individuals with chronic stress.^[6]

- 7. Yoga Nidra reduces stress: A 2020 study published in the International Journal of Yoga found that Yoga Nidra significantly reduced stress and anxiety in individuals with chronic stress.^[7]
- 8. Ashwagandha improves sleep: A 2019 study published in the Journal of Ayurveda and Integrative Medicine found that Ashwagandha supplementation improved sleep quality and reduced stress in individuals with insomnia.^[8]
- Panchakarma reduces cortisol levels: A 2018 study published in the Journal of Alternative and Complementary Medicine found that Panchakarma treatment reduced cortisol levels and improved stress tolerance in individuals with chronic stress.^[9]
- 10. Ayurvedic herbal remedies reduce stress: A 2019 review published in the Journal of Pharmacy and Pharmacology found that Ayurvedic herbal remedies, including Ashwagandha, Brahmi, and Tulsi, reduced stress and anxiety in individuals with stress-related disorders.^[10]

Here are some ongoing case studies on the efficacy of *Ayurvedic* management in stress management:

- Ayurvedic Intervention for Stress Management in College Student: A randomized controlled trial conducted by the University of Mumbai, India, to evaluate the effectiveness of Ayurvedic treatment on stress levels in college students.
- Efficacy of Ayurvedic Treatment on Chronic Stress-Related Disorders: A case-control study conducted by the All India Institute of Ayurveda, New Delhi, India, to assess the impact of Ayurvedic treatment on chronic stress-related disorders.
- 3. Ayurvedic Management of Work-Related Stress in IT Professionals: A pilot study conducted by the Sri Sri University, Odisha, India, to explore the effectiveness of Ayurvedic treatment on work-related stress in IT professionals.
- 4. Stress Management through *Ayurvedic Yoga* and Meditation: A randomized controlled trial

conducted by the University of California, Los Angeles (UCLA), USA, to investigate the effects of *Ayurvedic Yoga* and meditation on stress levels in healthy adults.

5. Ayurvedic Approach to Managing Stress in Patients with Chronic Diseases: A case series study conducted by the Apollo Hospital, Chennai, India, to evaluate the efficacy of Ayurvedic treatment in managing stress in patients with chronic diseases.

These studies are ongoing, and the results may not be published yet. However, they demonstrate a growing interest in exploring the potential of *Ayurvedic* management in stress management.

A classic example of stress and how to manage it through *Bhagavad-Gita*

The *Bhagavad-Gita* provides a classic example of stress and how to manage it through the story of Arjuna, a skilled warrior overwhelmed by the prospect of fighting in a war that goes against his moral principles. Arjuna's usual coping mechanisms fail him, leading to:

- 1. Negative self-evaluation
- 2. Confusion
- 3. Physical and psychological symptoms (stress effects)
- 4. Feelings of incompetence
- 5. Avoidance behaviour (seeking safety by avoiding the situation)
- 6. Anxiety-related responses
- 7. Exhaustion

This illustrates the impact of stress on an individual's mental and physical well-being. The *Bhagavad-Gita* then offers guidance on managing stress through spiritual practices, self-reflection, and a deeper understanding of one's values and purpose. *Krishna's* counsel to *Arjuna* provides a framework for developing resilience, re-evaluating priorities, and finding inner peace in adversity.

Krishna's approach to helping *Arjuna* manage his stress involves:

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- Identifying unrealistic and inopportune cognitive appraisals
- 2. Reinforcing Arjuna's coping mechanisms
- 3. Facilitating cognitive re-evaluation of:
 - a. Self (Arjuna's identity and values)
 - b. Object (the war and its implications)
 - c. Anticipated shock (the immorality of the war)
- Philosophical guidance to promote new perspectives and understanding

Krishna's strategy may seem unconventional, but it addresses the root cause of Arjuna's stress: his distorted and exaggerated perception of the situation. By reframing Arjuna's cognitive processes, Krishna enables him to:

- 1. Recognize his strengths and resources
- 2. Reassess the situation more realistically
- 3. Develop a more adaptive response to the challenge

Krishna's teachings may appear tangential to *Arjuna's* immediate concerns, but they address the underlying cognitive dynamics driving his stress. By transforming *Arjuna's* mindset, Krishna empowers him to cope more effectively.

Arjuna's stress stemmed from cognitive inadequacy, specifically:

- Inability to distinguish between self-appraisal (his values and beliefs) and situational demands (the requirements of the war).
- 2. Emotional disturbance, leading to:
 - a. Misevaluation of the object (war) as a personal disaster and life stress (loss of loved ones).
 - b. Inaccurate appraisal of the threat (sinfulness of war) as a reason for withdrawal.
- 3. Attempting to withdraw from the situation without addressing the underlying cognitive confusion.

This withdrawal would not have been an effective coping mechanism because:

- 1. The task (fighting in the war) was assigned to him, not self-generated.
- 2. Avoidance would not have resolved the cognitive dissonance and emotional turmoil.

Krishna's guidance aimed to correct Arjuna's errant self-appraisal and object-appraisal, enabling him to reevaluate the situation more accurately and respond more constructively.

Arjuna's cognitive framework was incomplete, leading to a conflict between his ideal self-appraisal and the task requirements. This was due to a reversal of the normal stress-response sequence. In the Samkhya-Yoga context, the typical sequence is:

- 1. Avidya (non-cognition) →
- 2. Asmita (self-appraisal) →
- 3. Raga (object-appraisal) →
- 4. Dvesha (threat-appraisal) →
- 5. Abhinivesa (coping orientation) →

However, in *Arjuna's* case, the general adaptive urge to survive (*Abhinivesa*) was blocked due to the overpowering influence of his:

- Distorted self-appraisal (Asmita)
- Inaccurate object appraisal (Raga)
- Exaggerated threat-appraisal (Dvesha)

This led to a mismatch between his ideal self-image and the task demands, causing cognitive dissonance and emotional turmoil. Krishna's guidance aimed to restore the correct sequence and facilitate a more adaptive response.

RESULTS

Research has demonstrated the effectiveness of Ayurvedic interventions in managing stress, particularly when combined with a multidisciplinary approach involving various stakeholders. comprehensive stress management plan should identify, recognize, and confront the root cause of stress, whether it is a situation, thought pattern, or emotion, and develop a plan to address and resolve it through a combination of strategies, including

counselling, attention diversion, and environmental changes. This approach can help individuals reframe their perception of stressors and mitigate their impact. However, the intricate balance between internal and external factors can be easily disrupted as stated in the classic example from the *Bhagavad Gita* leading to a cycle of attachment, desire, anger, and intellectual impairment. Breaking this cycle requires a holistic understanding of the interplay between individual, environmental, and organismic factors. Below are the approximate percentages that represent the average reduction in stress, anxiety, and depression symptoms based on the research studies mentioned earlier.

The charts below illustrate the efficacy of various *Ayurvedic* interventions in reducing stress, anxiety, and depression symptoms. *Yoga* and Meditation appear to be the most effective, followed closely by *Panchakarma* and *Satwavajaya*. Herbal supplements like *Ashwagandha* and *Brahmi* also show significant efficacy, while dietary changes and lifestyle modifications have a more moderate impact. Based on the data provided in already research done on this topic.

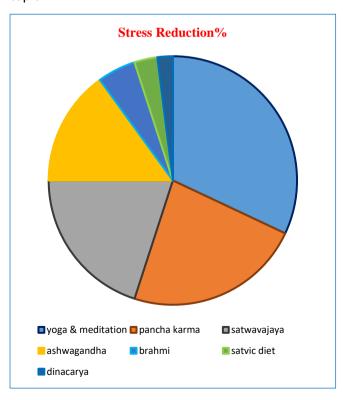


Fig.1: Illustration of Stress Reduction (%) by various *Ayurvedic* management.

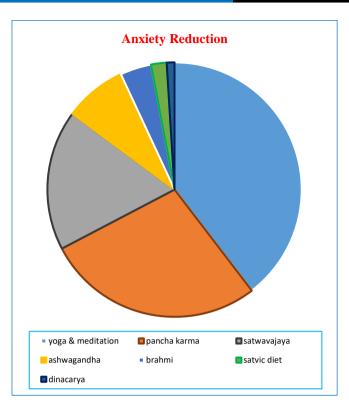


Fig. 2: Illustration Of Anxiety Reduction (%) by various *Ayurvedic* management.

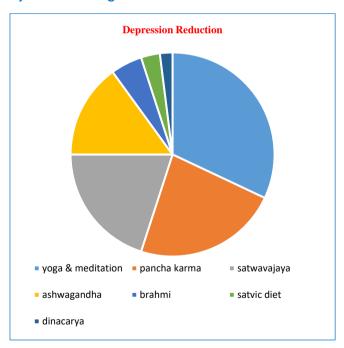


Fig. 3: Illustration Of Depression Reduction (%) by various *Ayurvedic* management.

DISCUSSION

Each mind is different from another because of its discrimination, creativity, and instinct. Mind is a special gift to mankind, though complex, and has the potential

to act as a dual nature. It is creative as well as destructive, positive as well as negative, active as well as dull, happy as well as sad. All these entities are well balanced by mind knowingly or unknowingly to people in their life. But this balancing nature of mind nowadays is getting deprived under the influence of growing stress and strains in life. Understanding the root cause is key to solving a problem. Minimize chronic stress, manage it when it happens, and embrace positive stress (eustress) for growth and success. It is interesting to note that all the early works on the subject, prescribe only the first three stages of planned life (Brahmachari as student, Grihastha as house-holder and Vanaprastha as a non-participant guide in the family or community), corresponding to the first three values (Artha, Kama, Dharma) together called *Tri-Varga*. The renunciates condition (*Sannyasa*) was historically a late concept in the social scheme, accommodating the fourth value (Apavarga, literally 'outside the group of values', or Moksha). Sannyasins are not mentioned in the Veda, the Vedanta, the classical Upanishads, or the Gita, in Ramayana or Mahabharata. They find mention only in the Puranas, the Smrti texts, and literary works of comparatively recent date.

India's cultural heritage has long prioritized family and social values. An Indian finds his fulfilment only within the family framework. Family plays a crucial role in shaping mental health in Indian culture, acting as either a source of support or stress and impacting individual coping mechanisms. And it cannot be reinforced unless the family stresses are also reduced. Involvement of family and re-education of family in the efforts to treat mental cases are Indian concepts. Controlling or restraining the mind from the desire for unwholesome objects is nothing but Satwavajaya, which can be achieved by increasing Satwa to subdue the vitiated Manasa Dosha i.e., Rajasa and Tamasa. The most effective way to attain the state of Satwavajaya (conquest of the mind) is through the cultivation of five key virtues: Jnana (knowledge), Vigyana (wisdom), Dhairya (patience), Smriti (memory), and Samadhi (meditative concentration). By developing these qualities, one realizes inner peace and liberation from

mental turmoil and emotions. Avoidance of *Pragyapradha* plays an important role in *Satwavajaya Chikitsa*. Satwavajaya requires a compassionate and positive approach, beginning with a strong doctorpatient bond to calm and reassure patients. The other psycho-supportive techniques are assurance, consoling the patient with proper guidance and suggestion, preaching religious and moral statements, quoting well-known references and mythological stories with good morals, giving verbal mental, and physical shocks, replacing emotions, entertaining the patient with recreational therapy and psycho-shock therapy i.e., by creating fear and terror also come within the limits of the definition of *Satwavajaya*.

Ayurvedic interventions effectively manage stress when combined with a multidisciplinary approach.

- A comprehensive stress management plan should identify and address the root cause of stress.
- Ayurvedic interventions can help reframe the perception of stressors and mitigate their impact.

Efficacy of *Ayurvedic* Interventions based on fig 1,2,3 illustrated above:

- Yoga and Meditation: most effective (32-40% reduction in stress, anxiety, and depression)
- Panchakarma and Satwavajaya: highly effective (23-28% reduction)
- Ashwagandha and Brahmi: significant efficacy (15-20% reduction)
- Dietary changes and lifestyle modifications: moderate impact (5-15% reduction)
- Ayurvedic interventions offer a holistic approach to stress management, addressing internal and external factors.
- The intricate balance between individual, environmental, and organismic factors can be disrupted, leading to a cycle of attachment, desire, anger, and intellectual impairment.
- Breaking this cycle requires a comprehensive understanding of the interplay between these factors.

- Ayurvedic interventions can help individuals develop coping strategies and resilience to manage stress.
- Further research is needed to explore the potential of Ayurvedic interventions in stress management.

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