



# Evidenced Based Treatment Protocols in Ayurveda For Academic Stress In School Children: A Critical Review

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## ABSTRACT:

**Introduction:** Academic stress in children is a significant concern in the present era due to intensification of academic demands, heightened competition, and the prevalence of mental health issues among students. This stress can lead to anxiety, depression, sleep problems and even physical health issues, impacting overall well-being and academic performances. **Aim and Objective:** To explore and elucidate the concept of academic stress from an Ayurvedic perspective and to present different treatment protocols that synergistically contribute to its prevention and management. **Material and Method:** This study draws upon literature sourced from Ayurvedic compendia, contemporary paediatric textbooks, and recent research articles published in academic journals. **Observations and Result:** Ayurveda views academic stress as a disruption in the mind-body connection, manifesting as psychosomatic symptoms. Its holistic protocols include dietary balance (ahara), lifestyle adjustments, herbal remedies (shamana), detox therapies (shodhana), psychotherapy (satvavayajachikitsa), and spiritual practices (daivavyapashrayachikitsa) to restore equilibrium and promote mental clarity, thereby providing sustainable solutions for managing academic stress. **Conclusion:** The application of evidence based Ayurvedic protocols in the management of academic stress in children offers a holistic and sustainable approach. By addressing underlying imbalances through constitution analysis, dietary and lifestyle modifications, herbal remedies, and stress management techniques, Ayurveda complements conventional interventions, promoting overall well-being and academic success in children.

**Keywords:** Academic stress, Ayurveda, stress, dosha imbalance

## I. INTRODUCTION:

Stress in children has become a growing concern in recent years due to various factors such as academic pressure, social media and technology,

family dynamics, extracurricular overload, high expectations, peer pressure. Stress is generally characterized as "the body's non-specific reaction to any form of demand." Eustress, or positive stress, refers to stress that enhances our well-being (such as physical exercise, achieving top marks in exams, or receiving promotions at work). Distress, or negative stress, is stress that negatively impacts health, often arising from mismatches between needs and available resources to address those needs.<sup>[1]</sup>

The prevalence of academic stress has emerged as a significant concern, encompassing the pressure and tension students encounter due to academic requirements such as examinations, assignments, competition, and the expectations set by parents and educators. This stress can result in manifestations like anxiety, depression, diminished motivation, and subpar academic performance, impacting both mental and physical well-being. According to a survey conducted by the Indian Council of Medical Research (ICMR), approximately 12-13% of students in India are affected by psychological, emotional, and behavioural issues. Additionally, a meta-analysis indicates that psychiatric disorders are reported in 6.5% of the general community and as high as 23.3% among school-aged children and adolescents.<sup>[2]</sup>

Ayurvedic texts do not offer a specific definition of academic stress; however, within the framework of Ayurveda, academic stress can be perceived as stemming from imbalances in the doshas, which are the foundational energies governing both physiological and psychological functions in the body. The Ayurvedic approach to addressing academic stress focuses on reinstating equilibrium and coherence within both the body (physiology) and the mind (psychology), advocating for personalized interventions to tackle root causes rather than merely alleviating symptoms. While conventional medicines effectively manage certain stress-related issues, they have limitations. Hence, alternative

approaches like Ayurveda hold significance, particularly in managing academic stress among children.

Present review aims to explore and elucidate the concept of academic stress from an Ayurvedic perspective. It delves into various treatment protocols that synergistically contribute to its prevention and management.

## II. MATERIAL AND METHOD:

The primary sources utilized in this study comprised traditional Ayurvedic texts such as the Charaka Samhita and Sushruta Samhita, alongside modern textbooks accessed through digital platforms including the Ayush Research Portal, PubMed, Google Scholar, and other relevant websites pertaining to the subject matter on the internet.

## III. OBSERVATION AND RESULTS:

Stress encompasses the collective physical, mental, and emotional strains or tensions experienced by an individual.<sup>[3]</sup> A stressor, on the other hand, is characterized as a stimulus or event that triggers a stress response within an organism.<sup>[3]</sup> Academic stressor for children can vary depending on factors such as age, educational environment, and individual circumstances. Some common academic stressors include high stakes exams, heavy workload, fear of failure, perfectionism, learning difficulties, parental expectations, time management, lack of support. Identifying and addressing academic stress is crucial for promoting children's well-being and helping them develop healthy coping mechanism for managing stress in school.

### Concept of Academic Stress from an Ayurvedic perspective:

Ayurveda acknowledges the close interrelation between the mind (manas) and body (sharira). Academic stress has the potential to disturb this connection, resulting in a range of psychosomatic symptoms. A harmonious state of satva is a crucial element of mental well-being, intricately intertwined with the body.<sup>[4]</sup> Therefore, disruptions in one aspect can impact the other, leading to the manifestation of illness at both the physical (sharira) and psychological (manas) levels<sup>[5]</sup> affecting achievements, whether they pertain to academics or other areas of endeavour.<sup>[6]</sup> This arises due to changes in higher mental faculties, including thought process (chintya), contemplation (vicharya), speculation (uhya), emotional thinking

(dhyeya), determination (sankalpa), control over sensory and motor faculties (indriyabhigraha), self-control (svanigraha), and intellect (buddhi).<sup>[7]</sup> Indeed, these disturbances are commonly observed in children experiencing academic stress. Over time, they can culminate in manifestations such as anger (krodha), grief (shoka), fear (bhaya), an anxious mind (chittodvega), disinterest in studies (ashraddha), decreased retention (alpamedha), hesitant behavior (hriyam), deviation in conduct (sheela), lack of sincerity (vashyata), and other related characteristics.<sup>[8]</sup> Moreover, intense stressful, emotional, and exhaustive factors predominantly disturb the vatadosha and consequently the rajoguna of the mind.<sup>[9]</sup> When tamoguna is disturbed, the child may experience depressive episodes (avasada).

### Ayurvedic Protocols in the Management of Academic Stress:

Ayurveda offers comprehensive protocols for managing academic stress that focus on balancing doshas, promoting mental clarity and supporting overall well-being.

#### 1. Role of Ahara:

Nutritious foods and a balanced diet are closely linked to mental health and have the potential to enhance the well-being of students, thereby potentially improving their academic success.<sup>[10]</sup> A well-balanced diet is crucial for maintaining harmony in both body and mind, thus averting the exacerbation of doshas that could contribute to stress. Ayurveda underscores fundamental dietary principles, including timely food intake (Kale Bhojana), consumption of foods suitable for one's constitution (SatmyaBhojana), adherence to individual dietary needs (HitaBhojan), maintaining proper hygiene (SuchiBhojan), opting for nourishing and oily foods (SnigdhaBhojan), selecting warm foods (UshnaBhojan), favoring easily digestible foods (LaghuBhojan), and practicing mindful eating with focus and appreciation, among others.

#### 2. Role of Lifestyle modification according to Ayurveda:

**a) Dincharya:** Dincharya, or daily routine, encompasses a set of activities outlined in Ayurveda aimed at promoting optimal physical and mental well-being. A research article on dinacharya underscores the significance of adhering to practices such as maintaining hygiene, engaging in physical exercise, abstaining from detrimental

habits, and cultivating healthy dietary habits. These practices are intricately linked to the social, mental, spiritual, and physical facets of overall health and functioning.<sup>[11]</sup>

**b) Yoga:** Yoga comprises physical postures, breathing techniques, meditation, and incorporates moral principles known as yama and niyama. These elements collectively aid in emotional cultivation, facilitating the reduction of inner conflicts.<sup>[12]</sup> As per a recent review examining yoga's impact on stress levels, participation in a yoga intervention led to a notable reduction in stress.<sup>[13]</sup>

**c) Sadvritta:** The stress response is influenced by an individual's personality, and cultivating a positive personality can be achieved through good conduct, known as "Sadvritta" in Ayurveda. "Sad" signifies goodness, while "Vritta" refers to behaviour, regimen, or habits integrated into our daily routine. Therefore, to prevent disturbances in both the sense organs and the mind, it is essential to endeavour to maintain normalcy through the practices of Sadvritta.<sup>[14]</sup>

### 3. Role of Shaman therapy:

Shamana is the process through which imbalanced doshas return to their normal state without causing an imbalance in other bodily humors. This treatment is accomplished through the administration of 'Medhyarasayanans', which are herbal remedies aimed at enhancing intellect and providing deep nourishment to neurological tissues. These medicines serve as targeted molecular nutrients for the brain.

**Mandookparni**(*Centellaasiatica*)contains valine, an essential amino acid known for its potential to enhance nervous system function and alleviate symptoms of nervousness.<sup>[15]</sup>

The methanolic extract of the whole plant of **Shankhapushpi** (*Convolvulus pluricaulis*) exhibits antistress properties. It has been observed to reduce exploratory behavioural patterns and suppress aggressive behaviour, as well as decrease spontaneous motor activity and induce hypothermia. Additionally, alterations in general behaviour patterns and potentiation of pentobarbitone sleeping time were noted with its administration.<sup>[16]</sup>

**Aindri**(*Bacopamonnieri*), contains bacosides, which serve as the primary active nootropic constituents.<sup>[17]</sup>

Additionally, preparations such as **Ashwagandharishta**, **Saraswatharishta**, **Saraswathachurna**, and **Manasamitragutika** are commonly utilized in this context.<sup>[18]</sup>

### 4. Role of Shodhana Therapy:

Shodhan therapy targets the elimination of vitiated doshas and the correction of Agni (digestive fire) and metabolic imbalances, which are the primary causative factors of various diseases. Specific therapies recommended for stress conditions include Abhyanga (oil massage), Shiroabhyanga (head massage), Shirodhara (continuous oil flow over the forehead), Nasya (nasal administration of herbal oils), and Basti (medicated enema).

**a) Abhyanga:** In this procedure, medicated oil is applied to entire body with a particular type of massage. It offers numerous benefits for managing academic stress like relaxation, stress reduction, improved sleep quality, enhanced circulation, balancing doshas.<sup>[19]</sup>

**b) Nasya:**Nasya, the nasal application of drugs, directly influences the brain through the nasal mucosa, acting as a gateway to the head.<sup>[20]</sup>Nasya improves cerebral functions, alertness, and concentration, with medications often containing lipid-soluble substances for passive absorption through nasal mucosa cell walls.

**c) Shirodhara:**Shirodhara brings benefits such as improved blood circulation, stress reduction, and enhanced memory. Pressure and vibration on the forehead target the hollow sinus, intensifying therapeutic effects. This, combined with a slight temperature increase, activates the thalamus and basal forebrain, restoring serotonin and catecholamine levels for better sleep.<sup>[21]</sup>

**d) Basti:**Acharya Charaka recognizes Basti as Ardhachikitsa, the primary Vata treatment.<sup>[22]</sup> Serving as the key avenue for the gut-brain axis, Basti effectively calms vitiated Vata, promoting optimal brain function.<sup>[23]</sup> Given Rajo Gunapredominance<sup>[24]</sup> controlled Vata is crucial, leading to the intentional inclusion of Basti in the treatment plan.

### 5. Role of SatvavajayChikitsa:

This form of therapy is an Ayurvedic psychotherapy primarily focused on addressing mental disturbances. It involves restraining the mind from desires for unwholesome objects and intellectual blasphemy, in conjunction with promoting good conduct.<sup>[25]</sup>

### 6. Role of DaivavyapashrayaChikitsa:

This therapy has been effective since ancient times, but its popularity declined significantly during the medieval period, largely due to the emergence of modern medicine. Despite its long-standing use, scientific evidence supporting

the efficacy of its various components remains limited. However, practices such as the use of mantras, gemstones (mani), rituals (hom), offerings (bali), etc., have been observed to enhance positivity in the mind and thereby strengthen mental resilience.

This holistic approach aligns well with the complex nature of academic stress and can offer sustainable solutions.

#### IV. DISCUSSION:

The rising prevalence of stress among children, particularly academic stress, has become a significant concern in recent years. In addressing academic stress, it is crucial to adopt a comprehensive approach that considers both conventional and alternative perspectives. While modern medicine offers effective interventions for managing certain aspects of stress, alternative systems like Ayurveda provide valuable insights into holistic well-being, especially in the context of academic stress in children.

According to Ayurvedic principles, academic stress disrupts this balance, leading to psychosomatic symptoms. Imbalances in doshas, the fundamental energies governing physiological and psychological functions, play a pivotal role in the manifestation of stress-related symptoms. In Ayurveda, managing academic stress involves restoring balance and harmony within the body and mind through personalized interventions. These interventions encompass dietary adjustments, lifestyle modifications, herbal therapies, detoxification procedures, psychotherapy, and spiritual practices. Each of these components plays a crucial role in alleviating stress and promoting overall well-being.

##### Dietary and Lifestyle Modifications:

Ayurveda emphasizes the importance of a balanced diet tailored to individual constitution (prakruti) and current imbalances (vikruti). Consuming nourishing foods at appropriate times, maintaining proper hygiene, and cultivating mindful eating habits contribute to overall health and help prevent dosha imbalances associated with stress.

Additionally, adhering to a daily routine (dinacharya) can significantly mitigate the effects of academic stress. Yoga, a cornerstone of Ayurvedic lifestyle practices, offers a holistic approach to physical and mental well-being through postures, breathing exercises, and meditation.

##### Shamana Therapies:

Ayurvedic herbs and formulations play a crucial role in managing academic stress by calming the mind, enhancing cognitive function, and nourishing the nervous system. Medicinal plants such as *Centella asiatica* (Mandookparni), *Convolvulus pluricaulis* (Shankhapushpi), and *Bacopamonnieri* (Aindri) exhibit adaptogenic and neuroprotective properties, making them valuable allies in combating stress-related symptoms.

##### Shodhana Therapies:

Shodhana, or detoxification, therapies aim to eliminate accumulated toxins (ama) from the body and restore equilibrium to the doshas. Procedures such as Abhyanga (oil massage), Shirodhara (pouring medicated oil on the forehead), Nasya (nasal administration of herbal oils), and Basti (medicated enema) are particularly beneficial for reducing stress, improving sleep quality, and enhancing mental clarity.

##### Psychotherapy and Spiritual Practices:

Ayurveda recognizes the interplay between the mind and body in the manifestation of stress-related disorders. SatvavajayChikitsa, or Ayurvedic psychotherapy, focuses on cultivating mental resilience, emotional intelligence, and spiritual well-being.

Furthermore, DaivavyapashrayaChikitsa, which incorporates spiritual practices such as chanting, prayer, and meditation, provides a deeper level of healing by addressing the root causes of stress and fostering a sense of connection with higher consciousness.

#### V. CONCLUSION:

In conclusion, academic stress in children poses a significant challenge to their overall well-being and academic performance. While modern medicine offers effective solutions, the holistic approach of Ayurveda provides valuable insights and interventions for managing stress at its root cause. By addressing imbalances in mind, body, and spirit through dietary modifications, lifestyle adjustments, herbal therapies, detoxification procedures, psychotherapy, and spiritual practices, Ayurveda offers sustainable solutions for alleviating academic stress and promoting holistic well-being in children.

Further research and integration of Ayurvedic principles into mainstream healthcare practices can contribute to a more comprehensive approach to addressing academic stress and

improving the quality of life for children worldwide.

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