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Role Of Stress And Manas Dosha In Digestive Dysfunction

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ABSTRACT:

Stress is a major contributor to digestive disorders, and modern research shows strong links between psychological stress, HPA axis activation, altered gut motility, dysbiosis, and serotonin imbalance. Ayurveda similarly describes how mental factors such as Chinta (worry), Bhaya (fear), and Krodha (anger) disturb Manas Dosha and weaken Agni, leading to Ama formation and digestive dysfunction. This study examines the psychosomatic relationship between stress, Manas Dosha, and Agni from both Ayurvedic and modern scientific perspectives.

KEYWORDS:

Manas dosha, Stress, Psychosomatic disorders, Digestive Disfunction, Ayurveda

INTRODUCTION:

Stress is one of the main causes of digestive problems today. Ayurveda has long explained how the mind and digestion are closely connected. Mental factors like worry, fear, and anger disturb the Doshas and weaken Agni, causing poor digestion and formation of Ama.

Modern research supports this idea. Stress activates the HPA axis, increases cortisol, disturbs gut movement, reduces beneficial gut bacteria, and affects serotonin levels. These changes lead to digestive symptoms very similar to what Ayurveda describes as Vishamagni, Mandagni, and Tikshnagni.

Stress is now recognized as a major cause of digestive problems in modern medicine. Studies show that 50–90% of people with conditions like Irritable Bowel Syndrome (IBS), functional dyspepsia, and flare-ups of inflammatory bowel disease (IBD) have symptoms linked to psychological stress[1][2]. Even though the role of stress is well known, treatments mostly depend on medicines like SSRIs and antispasmodics, which often do not give complete relief and may cause side effects[3].

Ayurveda, which has existed for thousands of years, has long described the strong link between the mind and body. It explains how mental stress (Manas Nidana) directly disturbs the Doshas and weakens digestive fire

(Jatharagni). This ancient understanding matches very well with current scientific findings on the gut–brain–microbiota axis[4].

AIM AND ONJECTIVES

Aim: To explore the relationship between Stress, Mansa Dosha And Agni Objectives: 1. To

study Ayurvedic concepts related to Manas Dosha, Agni and Stress

2. To analyze modern scientific mechanism of stress induced GIT Disorders.

3. To ascess therapeutic approaches for stress induced digestive disorders.

MATERIALS AND METHODS

- Charaka Samhita (Sutra Sthana, Sharira Sthana, Chikitsa Sthana)
- Sushruta Samhita (Sutra Sthana, Sharira Sthana)
- Ashtanga Hridayam (Sutra Sthana, Sharira Sthana)
- PubMed, Scopus, Google Scholar (2000-2025) for HPA axis, stress physiology, gut-brain- microbiota axis, psychosomatic medicine

RESULT AND DISCUSSION

Charaka Samhita highlights the importance of the mind by stating: *"Mano Hi Parama Karana"*—the mind is the main cause of health or disease [Cha.Sa.Su.1/42][5]. It also says that life depends on the balanced functioning of body, mind, intellect, and consciousness: *"Sharir Mano Buddhi Atma Samyoga Jivitam"* [Cha.Sa.Su.1/42][5]. These statements show that mental imbalance plays a central role in the beginning and progression of diseases.

In Ayurveda texts, Mansik Bhavas like Chinta, Bhaya, Shoka, Krodha are mentioned as

causative factor (Nidana) of most of the Digestive diseases. Shoka, Bhaya in Vaataj Chhardi Nidana, Shoka, bhaya, Krodha in Aruchi Nidana, Chinta, Shoka, Bhaya, Krodha in Ajirna, Krodh, Irshya, Bhaya, Shoka in Atisaar Nidana, Krodh, Shoka in Arsh Nidana etc.

Stress-Induced Jatharagni Dysfunction

Charaka Samhita clearly explains how psychological stress directly weakens Jatharagni. It states that emotions like Chinta (worry), Bhaya (fear), Krodha (anger), Harsha (excessive joy), shoka (sorrow), Kama (lust), and Irsha (envy) disturb the mind and in turn damage Agni:
"Chinta, Bhaya, Krodha, Harsha, Shoka, Kama, Asuya—Mano Vikara Agnim Dushyanti" [Cha.Sa.Sha.1/50][5]. Charaka explained Ahara vidhi (rules of taking food). His satatement "tanmannā bhunjeeta" emphasizes mindful eating. He explains that a calm, focused mental state during meals stabilizes Agni, supports proper digestion, and prevents disorders caused by emotional disturbances. Ayurveda considers the mind an active regulator of Agni therefore, eating with attention is essential for strong Agni and good health. [Cha.Sa.Vi.1/9]

When Agni becomes disturbed, it often results in **Vishamagni**, an irregular and unpredictable digestive fire. This leads to incomplete digestion and the formation of **Ama**, which is a toxic, sticky substance created from

improperly digested food. Ama then blocks the body's channels (srotas), causing many digestive and systemic health problems[6].

Modern Psychosomatic Understanding

Modern science has now discovered clear mechanisms that show how psychological stress harms the digestive system:

HPA Axis Activation

Chronic stress stimulates the hypothalamic–pituitary–adrenal (HPA) axis, raising cortisol levels for long periods. High cortisol suppresses gastric acid secretion, reduces pancreatic enzyme production, and impairs intestinal motility[7][8].

Autonomic Nervous System Imbalance

Stress increases sympathetic activity and reduces parasympathetic (vagal) activity. The vagus nerve controls most digestive functions including regulation of gastric emptying, pancreatic function, and bile secretion[3][9].

Gut Microbiota Dysbiosis

Stress disturbs the gut microbiome by:

- lowering beneficial bacteria
- weakening the protective mucus layer
- reducing short-chain fatty acid (SCFA) production
- increasing harmful bacteria that produce inflammatory toxins like LPS[10][11]

Serotonin Dysregulation

About 95% of the body's serotonin is produced in the gut. Stress affects bacterial serotonin synthesis while increasing stress-induced tryptophan catabolism via the kynurenine pathway, reducing serotonin availability for normal gastrointestinal motility and mood regulation[12][13].

Increased Gut Permeability

Stress activates mast cells, increases histamine, and reduces tight junction proteins, causing "leaky gut." Harmful substances like LPS can then enter the bloodstream, triggering inflammation[14][15].

Visceral Hypersensitivity

Chronic stress increases the sensitivity of the nervous system, making normal gut sensations feel painful. This is why many patients with functional digestive disorders experience pain even when tests appear normal[3][16].

Psychosomatic Dosha–Agni–Stress Axis

Classical Ayurvedic Sequence

Ayurveda describes a clear chain of events:

Mental Stress (Chinta, Bhaya, Krodha) **→Dosha Aggravation →Disturbed Agni** (Vishamagni, Tikshnagni, Mandagni) **→Formation of Ama →Blockage of Body Channels (Srotorodha) → Digestive and Systemic Disease**

This shows how psychological stress first disturbs the mind, then Doshas, and finally affects digestion and overall health.

Modern Scientific Sequence

Modern research describes a very similar process:

Psychological Stress →Activation of the HPA Axis →Sympathetic Overactivity (fight-or-flight) →Reduced digestive secretions and slowed motility →Changes in gut bacteria (dysbiosis) →Leaky gut and inflammation →Serotonin imbalance and hypersensitivity → Functional gastrointestinal disorders

The modern view closely matches the Ayurvedic explanation of how stress disturbs digestion and causes disease.

Constitutional Stress Patterns

Ayurveda explains that each Dosha responds to stress in a different way, creating characteristic mental symptoms, digestive changes, and disease patterns. These are linked to the qualities of **Rajas** and **Tamas**.

Vata-Anxiety-Vishamagni Triad

Manifestations of Vata: Chinta, Bhaya

Manifestations of Anxiety: Scattered thoughts, insomnia, palpitations.

Agni Dysfunction: Vishamagni—erratic, unpredictable digestion; alternating appetite and inappetence

GI Symptoms: IBS-D/IBS-C pattern with prominent pain, gas, bloating, alternating constipation- diarrhea

Mechanism: Mechanism

- Increased Vata disturbs **Saman Vayu**, leading to irregular gut movement
- Stress activates the HPA axis → increases sympathetic activity
- Dysbiosis increases sensitivity of gut nerves → more abdominal pain[5][6][16]

Pitta-Anger-Tikshnagni Triad

Manifestations of Pitta: Krodha

Manifestations of Anger: Irritability, Perfectionism, Competitive intensity, "burning" sensations internally

Agni Dysfunction: Tikshnagni—excessive, sharp digestive fire; rapid metabolism, always hungry **GI**

Symptoms: IBS-D with hyperacidity, heartburn, diarrhea, tenesmus, possible blood in stools **Mechanism:**

- Pitta excess increases Pachaka Pitta, causing hyperacidity and rapid transit
- Krodha (anger) enhances HPA axis with predominant sympathetic/adrenergic features; Mucosal inflammation from acid damage and stress-induced dysbiosis increase intestinal permeability and LPS translocation[5][6][8][11]

Kapha-Depression-Mandagni Triad

Manifestations of Kapha: Jadatva (heaviness), lethargy

Manifestations of Depression: Hopelessness, Attachment, Inertia, Low Motivation

Agni Dysfunction: Mandagni—weak, sluggish digestive fire; slow metabolism, satisfied with small meals

GI Symptoms: IBS-C with slow transit, infrequent hard stools, excessive mucus, sensation of incompleteness; weight gain despite reduced appetite

Mechanism:

- Excess Kapha suppresses Jatharagni through its cold, heavy qualities
- Shoka (depression and sorrow) cause parasympathetic overactivation with reduced dopamine and noradrenaline
- Slow transit allows dysbiotic fermentation and Ama accumulation. Reduced SCFA production from dysbiotic shift further impairs barrier function[5][6][10][11]

Modern Mechanisms: Validating Ayurvedic Pathophysiology

Modern scientific research strongly supports the Ayurvedic explanation of how stress weakens Agni and leads to disease. The following mechanisms clearly match classical descriptions.

HPA Axis and Agni Suppression

Chronic psychological stress triggers hypothalamic CRH → pituitary ACTH → adrenal cortisol. Elevated cortisol suppresses:

- Gastric acid secretion (Mandagni effect)
- Pancreatic enzyme production (Agni suppression)
- Intestinal motility (Vishamagni effect)

This directly parallels Charaka's assertion that Chinta and Bhaya vitiate Agni[5][7][8].

Dysbiosis as Modern Ama

Stress-induced dysbiosis produces:

- Reduced beneficial SCFA-producing bacteria (Faecalibacterium prausnitzii, Roseburia)
- Increased pathogenic gram-negative species (Proteobacteria) producing lipopolysaccharides (LPS)
- Reduced production of short-chain fatty acids (butyrate, propionate)

- Impaired serotonin synthesis by commensal bacteria
- This dysbiotic, pro-inflammatory state—characterized by toxic, sticky bacterial metabolites accumulating in the digestive tract—precisely constitutes Ama in modern microbial terms[6][10][11].

Therapeutic Interventions

Meditation (Dhyana): Calming the Mind & Regulating the HPA Axis

Ayurveda offers several methods to calm the mind, balance the Doshas, and restore Agni. Modern research now supports these practices, showing they improve stress responses, digestive function, and overall wellbeing.

How Meditation Helps (Mechanisms)

- Lowers HPA axis activity → reduces cortisol and ACTH
- Increases vagal tone (parasympathetic activity)
- Balances the autonomic nervous system
- Reduces rumination and worry (Chinta)
- Decreases amygdala activity → lowers fear and emotional reactivity
- Reduces visceral hypersensitivity (less abdominal pain)

Evidence

An 8-week MBSR program reduces IBS symptom scores by **40–50%**, with benefits lasting for over a year[22].

Ayurvedic Integration: Meditation restores Samagni (balanced fire) by pacifying Chinta-induced Vishamagni and HPA axis activation[5][22]

Pranayama (Breathing Techniques): Strengthening Vagal Tone

Different techniques support different constitutions:

- **Nadi Shodhana (Alternate Nostril Breathing)** for Vata-Rajas:
    - Balances left (Ida—mental) and right (Pingala—vital) energy channels
    - Stabilizes sympathetic-parasympathetic tone
    - Calms Chinta and Bhaya
    - Mechanism: Direct vagal stimulation via pharyngeal tone[9][23]
    - **Bhramari (Humming Bee Breath)** for Pitta-Rajas:
    - Prolonged exhalation with humming vibration
    - Reduces anger (Krodha), reduces intensity
    - Vagal stimulation via laryngeal tone[23]
- **Ujjayi (Ocean Breath)** for Kapha-Tamas:

- Warming, energizing effect
- Stimulates parasympathetic function
- Enhances digestion and metabolism[23]

Mechanisms:

- Vagal stimulation via laryngeal and pharyngeal activation
- CO_2 optimization regulating cerebral blood flow and brainstem chemoreceptor activity
- Phrenic nerve activation (80% of vagal parasympathetic fibers)
- Mental focus redirects from worry toward somatic awareness

Clinical Evidence: Pranayama increases gastric emptying, reduces anxiety, improves IBS symptom severity[26][27][28]

Yoga Asana: Improving Srotas and Enhancing Agni

Beneficial Practices:

- **Forward Bends** (Paschimottanasana, Uttanasana):
  - Enhance Apana Vayu (downward-moving air)
  - Improve constipation, reduce Vata aggravation[29]
- **Twists** (Ardha Matsyendrasana):
  - Massage abdominal organs
  - Enhance Jatharagni and enzyme secretion[29]
- **Child's Pose** (Balasana):
  - Pacifies Vata and Pitta
  - Calms anxiety and promotes parasympathetic activation[29]
- **Corpse Pose** (Savasana):
  - Induces parasympathetic dominance
  - Reduces cortisol, allows nervous system recalibration[17][29]

Evidence: Gentle yoga reduces IBS symptom severity by 40-60% in clinical trials[30]

Dinacharya (Daily Routine): Constitutional Stress Prevention

Vata Constitution (Anxiety-Prone):

- Consistent daily schedule (prevents Vata's erratic qualities)
- Warm, nourishing breakfast
- Warm sesame oil massage (Abhyanga)
- Warm herbal teas (Ginger, Ashwagandha)
- Early bedtime, consistent sleep-wake cycle

Pitta Constitution (Anger-Prone):

- Cool environment, avoiding excess heat

- Moderate eating habits
- Cooling herbs (Brahmi, Shankhapushpi, Shatavari)
- Evening walks in cool air
- Practice forgiveness meditation

Kapha Constitution (Depression-Prone):

- Active morning routine and exercise
- Warm spices, stimulating breakfast (Trikatu)
- Morning oil massage with warming oils
- Regular cardiovascular activity
- Social engagement and morning sunlight exposure

Evidence: Consistent daily routine reduces cortisol variability, improves sleep quality, supports digestive regularity[31][32]

CONCLUSION

This review establishes the classical Ayurvedic psychosomatic Dosha-Agni-stress framework as a mechanistically accurate model of stress-induced gastrointestinal dysfunction, validated by contemporary neuroscience.

- **Manas Dosha (Mental Constitution)** directly predisposes to characteristic stress patterns (Vata anxiety, Pitta anger, Kapha depression) initiating Agni dysfunction[5][6]
- **Psychological stress initiates a physiological cascade** from HPA axis activation through sympathetic dominance, digestive suppression, dysbiosis, chronic inflammation— mechanistically identical to Charaka's description of stress vitiation of Agni[5][8][10]
- **Stress-induced Vishamagni, Tikshnagni, or Mandagni** create characteristic IBS subtypes through impaired motility, hyperacidity, or sluggish digestion[5][6][8]
- **Dysbiosis as modern Ama** describes pro-inflammatory dysbiotic states with toxic bacterial metabolites and reduced beneficial commensals[10][11]
- **Manas Shamana interventions** meditation, pranayama, yoga, dinacharyarestore parasympathetic tone, normalize HPA axis, reverse dysbiosis—superior to pharmacological management alone[17][22][23][28]
- **Constitutional stress management** (Vata-specific calming, Pitta-specific cooling, Kapha- specific

stimulation) provides personalized approaches superior to one-size-fits-all interventions[5][6]

This framework offers profound implications: stress is not merely psychological but a primary pathogenic force initiating physiological, microbial, and systemic dysfunction. Ayurvedic psychosomatic Manas Shamana practices, requiring no pharmaceuticals and adaptable to resource-limited settings, provide effective root-cause management of stress-related gastrointestinal and systemic disorders.

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