ORIGINAL RESEARCH PAPER

Ayurveda

ACADEMIC STRESS AND ITS ASSOCIATION WITH DIFFERENT DOSHAJA PRAKRITI AMONG BAMS STUDENTS: A CROSS-SECTIONAL STUDY.

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ABSTRACT

Background: Academic stress is a prevalent concern among medical students, especially in Ayurveda courses due to their dual curriculum load. Ayurveda identifies individual constitution or Prakriti, classified into Vata, Pitta, and Kapha, which may influence stress response. Prakriti refers to an individual's unique constitution and innate disposition. It represents the expression of physiological functions through the form of morphology, bodily functions, and behavioral tendencies. Academic stress impacts on Students Physical health effects, Cognitive consequences. This study is design to assess Prakriti and the academic stress levels among BAMS students. **Objective:** To assess the level of academic stress and its association with different Doshaja Prakriti among BAMS students. **Methods:** A cross-sectional study was conducted among 120 BAMS students. Academic stress was assessed using the Medical Student Stressor Questionnaire (MSSQ), and Prakriti was assessed using a CCRAS Prakriti assessment. Data were analyzed. One way ANOVA tests were used to evaluate the association between stress levels and Prakriti types. **Observation & Analysis:** Pittapradhana Prakriti students showed a significantly higher level of academic stress ($p<0.05$) compared to Vatapradhana and Kaphapradhana Prakriti. Emotional and academic domain stressors were more prevalent. Kaphapradhana-dominant students showed better stress resilience. **Conclusion:** BAMS Students with Pittapradhana Prakriti had the highest academic stress levels, tailed by Vatapradhana, and the lowest were found in Kaphapradhana Prakriti students.

INTRODUCTION:

Academic stress refers to the physiological and psychological reactions to educational demands perceived as exceeding the adaptive capacity of students (Yusoff, 2011).[1] BAMS students face a unique challenge, navigating both classical Ayurvedic texts and modern medical sciences, which may predispose them to stress.

Prakriti refers to an individual's unique constitution and innate disposition. It represents the expression of physiological functions through the form of morphology, bodily functions, and behavioral tendencies. In Ayurvedic science, Prakriti is primarily understood in terms of Dosha Prakriti, which denotes the inherent dominance of specific doshas—Vata, Pitta, or Kapha—in a person.

This Concept Is Elaborated In Charaka Samhita, Sutra Sthana 7/43, Where It Is Stated:

"Doshanushayita hyesham dehaprakriti uchyate."

This means that Deha Prakriti, or bodily constitution, is formed by the persistent association (Anushaya) of doshas within an individual. The term Anushaya implies a close and inseparable connection or attachment. Because of this intimate bond, the inherent qualities of the doshas manifest within the body.[2]

These manifestations occur in three primary ways: Morphological traits – referring to the body structure and appearance. Physiological functions – indicating how the body operates internally. Psychological tendencies – reflecting mental behaviour and emotional responses.

Thus, Prakriti serves as the foundation for understanding an individual's physical characteristics, health predispositions, mental patterns, and disease susceptibility, making it a cornerstone concept in personalized Ayurvedic diagnosis and treatment.[3]

Prakriti—the constitutional makeup of an individual is said to influence disease susceptibility, psychological characteristics, and stress coping mechanisms. The three Doshaja types—Vata, Pitta, and Kapha have distinct psychological profiles. Pitta is associated with intensity and competitiveness, Vata with creativity but anxiety, and Kapha with calmness and stability (Sharma et al., 2020).[4]

Prevalence of Academic stress 91.1% found in in medical students in India.[5]

The reasons such as Pressure & Competition, Time Demands, Self-Expectations & Mindset, Learning Strategies and Environment- Inefficient study routines, disorganization, and distractions induce last-minute panic and cramming, Social & Emotional Factors responsible for increasing academic stress.

Academic stress impacts on Students- Physical health effects: Headaches, digestive issues, fatigue, and disturbed sleep. Cognitive consequences: Anxiety hinders memory, concentration, and exam performance. Emotional damage: Persistent stress can cause burnout, low motivation, depression, and negative self-talk. Social repercussions: Relationships suffer as students pull away or fixate on performance.

This study is design to assess Prakriti and the academic stress levels among BAMS students.

Aim- To assess the level of academic stress and its association with different Doshaja Prakriti among 1st-year BAMS students.

Objectives: - To assess the level of academic stress and its association with different Doshaja Prakriti among 1st-year BAMS students.

Methodology:-
Study Design: Cross-sectional, observational study.
Study Population: 120 BAMS students from a Ayurved college Nashik. Informed consent was obtained.
Sample Size- 120 BAMS students.

Inclusion Criteria-
- **Age-** 17 to 22 years.
- **Gender –** Both male & Females only.

- BAMS students
- Willing to participate and provide consent

Exclusion Criteria-
- Known psychiatric illness.
- Currently on medication affecting mood.

Tools:
- Medical Student Stressor Questionnaire (MSSQ) – for assessing stress domains
- Ayurvedic Prakriti Assessment Tool based on Charaka Samhita and modern validated tools (CCRAS)

Plan Of Work-
- Screening of all Students was done till the criteria of desired sample size are fulfilled.
- Written informed consent of all Students was taken.
- Selected 120 BAMS Students were examined for prakriti by CCRAS prakriti format.
- Stress was assessed with the help of Medical Student Stressor Questionnaire (MSSQ).
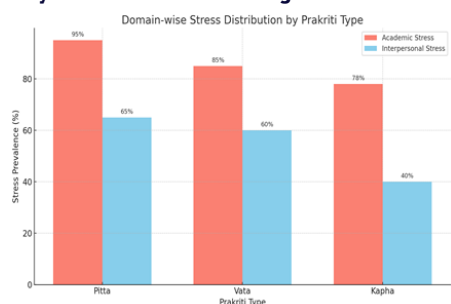- Data was collected in Tabular form.

Observations:
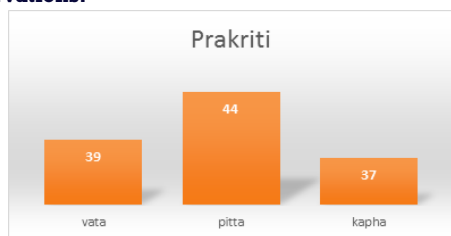
Frequency Distribution According To Prakriti.
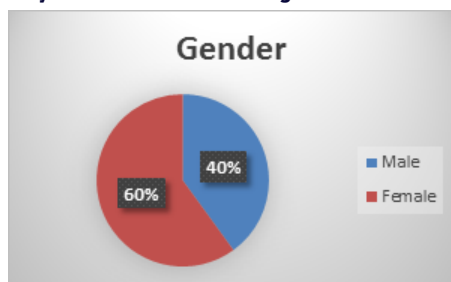
Frequency Distribution According To Gender.

Frequency Distribution According To Stress Distribution By Prakriti..

Statistical Analysis:
Data were analyzed using SPSS v25. Mean stress scores were compared across Prakriti groups using ANOVA. Chi-square test used for categorical variables.

Aim: To evaluate the association between Ayurvedic Prakriti types (Pittapradhana, Vatapradhana, and Kaphapradhana) and academic stress levels among BAMS students using the Medical Student Stress Questionnaire (MSSQ).

Hypothesis

- Null Hypothesis (H_0): There is no significant difference in academic stress levels (MSSQ scores) among students of different Prakriti types.
- Alternative Hypothesis (H_1): There is a significant difference in academic stress levels (MSSQ scores) among students of different Prakriti types.

Descriptive Statistics
Table: MSSQ Scores Across Prakriti Types

Prakriti Type	Sample Size (n)	Mean MSSQ Score ± SD
Pittapradhana	44	3.1 ± 0.5
Vatapradhana	39	2.6 ± 0.6
Kaphapradhana	37	2.2 ± 0.4

Overall, high academic stress levels (defined as MSSQ score > 2.5) were found in 61% of the students.

A one-way ANOVA was conducted to compare mean MSSQ scores across the three Prakriti types. The analysis showed:
$F(2, 117) = 9.08, p = 0.004$

Since the p-value is < 0.05, the result is statistically significant, suggesting that Prakriti type influences academic stress levels.

Tukey's HSD post hoc analysis showed:
- Pittapradhana vs. Kaphapradhana: Significant difference ($p < 0.01$)
- Pittapradhana vs. Vatapradhana: Moderate difference ($p < 0.05$)
- Vatapradhana vs. Kaphapradhana: Not significant ($p > 0.05$)

Students with **Pittapradhana Prakriti** had the highest academic stress levels, followed by **Vatapradhana**, and the lowest were found in **Kaphapradhana Prakriti** students. The findings are consistent with Ayurvedic principles, highlighting the need for **Prakriti-based individualized stress management strategies** in academic environments.

DISCUSSION:
The inaugural year of the Bachelor of Ayurvedic Medicine and Surgery (BAMS) course represents a challenging academic transition. Students must grapple with a rigorous new curriculum encompassing classical Sanskrit texts (e.g., Samhita Adhyayan), combined with exposure to modern medical sciences—all within a time-bound, memory-intensive institutional framework. This transition often results in elevated anxiety, cognitive overload, and stress—as confirmed by multiple studies among Ayurveda and medical undergrads.

Ayurveda conceptualizes academic stress primarily as **Chittodvega**, a psychological state marked by disturbed mind (citta) due to the imbalance of doshas (vatapradhana, Pittapradhana, kaphapradhana) and mental qualities (rajas, tamas). This disturbance weakens Ojas, undermining resilience and manifesting physiological, emotional, and cognitive symptoms.[6]

In present study Demographic Data showed Gender: Male: 48; Female: 72, Age: 17–22 years.

Prakriti Distribution - Pittapradhana: 44 students (36.6%), Vatapradhana: 39 students (32.5%), Kaphapradhana: 37 students (30.8%) were found.

Considering the Stress Levels: High stress levels (Total MSSQ score > 2.5) found in 61% of students.

One way ANOVA test used for Analysis.
Pittapradhana Prakriti: Mean MSSQ score = 3.1 ± 0.5, Vatapradhana Prakriti: Mean = 2.6 ± 0.6, Kaphapradhana

Prakriti: Mean = 2.2 ± 0.4, p-value = 0.004 (ANOVA).

Students with **Pittapradhana Prakriti** had the highest academic stress levels, followed by **Vatapradhana**, and the lowest were found in **Kaphapradhana Prakriti** students.

Domain-wise Stress: Highest stressors: Academic (87%), Interpersonal (55%)

At the heart of Ayurveda is Prakriti, the uniquely individual constitutional makeup defined by dominant dosha(s). Prakriti significantly influences how students process stress and emotions. In particular:

- Pittapradhana Prakriti individuals tend to be sharp, goal-oriented, analytical, and competitive—but are prone to irritability, perfectionism, and burnout when overwhelmed.
- Kaphapradhana Prakriti individuals are more grounded, composed, resilient, and patient—showing slower, but more stable stress handling.
- Vatapradhana Prakriti individuals (especially those with Vatapradhana-Pittapradhana blending) are susceptible to anxiety, restlessness, reduced concentration, and mental de-stabilization.

Cross-sectional Study Aligns Well With Existing Evidence:

- Higher stress among Pittapradhana and Vatapradhana–Pittapradhana students: The competitive drive and perfectionist tendencies commonly attributed to Pittapradhana—or mixed Vatapradhana– Pittapradhana—translate into over-engagement, self-criticism, and emotional volatility, especially when coupled with heavy coursework.
- Resilience among Kaphapradhana students: Their patient, steady, and emotionally grounded traits give them a buffer against academic stress. They may not excel in intense bursts, but maintain emotional equanimity.

Mechanisms Behind Dosha-Linked Stress Patterns

- **Pittapradhana Stress Pathways:** Over-engagement leads to activation of Rajas (restlessness), mental overheating, irritability, and potential burnout.
- **Vatapradhana–Pittapradhana pathways:** Combination of Vatapradhana instability (fear, lack of focus) with Pittapradhana's intensity creates mental turbulence and increased distractibility.
- **Kaphapradhana Mechanisms:** Their anchored disposition promotes slow but steady progress and clear decision-making even in stress.

The study found that Pittapradhana Prakriti students reported significantly higher academic stress, aligning with Ayurvedic descriptions of Pittapradhana dominance being linked with perfectionism and competitiveness. Kaphapradhana students exhibited better stress resi

Findings support the idea of personalized stress management and mentorship in Ayurveda education, leveraging Prakriti-based strategies (yoga, diet, lifestyle modifications).

Similar patterns have been reported in other Indian studies linking Prakriti with mental health traits (Patwardhan et al., 2008).[3]

CONCLUSION:
The research study concluded that BAMS Students with **Pittapradhana Prakriti** had the highest academic stress levels, tailed by **Vatapradhana**, and the lowest were found in **Kaphapradhana Prakriti** students.

Limitations:
- Small sample size from a single institution
- Cross-sectional design limits causality inference

Recommendations:
- Larger multicentric studies
- Longitudinal tracking of stress patterns
- Integration of Ayurvedic lifestyle interventions in student wellness programs

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