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FACTORS CAUSING STRESS AMONG FIRST-YEAR BAMS STUDENTS (2022/2023) OF THE UNIVERSITY OF COLOMBO (A PILOT STUDY)

N. K. W. Wickramasinghe¹, D. A. L. Munasinghe^{2}*

¹Faculty of Indigenous Medicine, University of Colombo

^{2*}Senior Lecturer, Faculty of Indigenous Medicine, University of Colombo

munasinghe@fim.cmb.ac.lk

ABSTRACT :

Stress is a prevalent concern among university students, with first-year undergraduates particularly vulnerable due to the transition from structured school environments to self-directed university learning. This pilot study investigates the prevalence and determinants of stress among first-year Bachelor of Ayurvedic Medicine and Surgery (BAMS) students at the Faculty of Indigenous Medicine, University of Colombo. A descriptive cross-sectional pilot study was conducted between June and August 2025 among 30 students selected through systematic random sampling. Data were collected using a pretested, self-administered questionnaire covering socio-demographics, academic workload, psychosocial factors, and personal experiences. Results indicated that moderate stress was predominant (50%), followed by high (33.3%), low (13.3%), and very high (3.3%) stress. Headache and dizziness were the most reported stress-related symptoms (43.3%), while examination periods were the primary stress trigger (56.7%). Stress was significantly associated with adjustment to university life, social relationships, perceived institutional support, feelings of being overwhelmed by academic workload, and financial difficulties. Academic workload alone was not a significant predictor. These findings highlight that stress among first-year BAMS students is multifactorial, with psychosocial and environmental factors playing a larger role than academic load alone. Interventions focusing on student support, stress management, and mentorship are recommended to promote mental well-being and academic success.

Keywords: Stress, BAMS students, academic workload, psychosocial factors, university adjustment, mental health.

1. Introduction

University life represents a major transitional period marked by increased independence, new responsibilities, and exposure to unfamiliar academic and social environments (Misra & McKean, 2000). First-year students face unique challenges as they shift from structured school routines to self-directed learning, which may adversely affect psychological well-being. Students enrolled in medical and allied health programmes, including Ayurveda, often experience heightened stress due to long study hours, complex curricula, and intensive examinations (Dahlin, Joneborg, & Runeson, 2005).

The Bachelor of Ayurvedic Medicine and Surgery (BAMS) programme at the Faculty of Indigenous Medicine, University of Colombo, integrates traditional Ayurvedic knowledge with modern biomedical sciences. This dual curriculum increases cognitive demands and contributes to psychological strain (Ravikumar, Reddy, & Sharma, 2019). Additional stressors include relocation from rural to urban areas, financial constraints, cultural adjustments, and limited family support (Ross, Niebling, & Heckert, 1999; Kumar & Bhukar, 2013). Persistent stress can result in anxiety, depression, burnout, impaired concentration, and poor academic performance (Bayram & Bilgel, 2008; Dyrbye, Thomas, & Shanafelt, 2006).

Despite considerable research on stress among medical undergraduates in Sri Lanka, limited studies focus on Ayurveda students. Considering the unique academic and cultural context of Ayurveda education, localized studies are necessary to identify specific stressors and inform targeted interventions (Jayasuriya & Wijesinghe, 2020). This study aimed to assess the prevalence, determinants, and manifestations of stress among first-year BAMS students at the University of Colombo.

2. Literature Review

Stress is a universal psychological and physiological response to perceived challenges that exceed an individual's coping resources (Shankar & Balasubramanian, 2018). Lazarus and Folkman's transactional model emphasizes that stress is subjective, depending on cognitive appraisal of demands relative to available coping strategies (Lazarus & Folkman, 1984; Folkman & Lazarus, 1988). Prolonged stress among students can lead to academic burnout, absenteeism, and declining performance (Misra & McKean, 2000).

Global evidence indicates that university students commonly experience stress from academic workload, examinations, financial challenges, and social adjustments (Abouserie, 1994; Ross et al., 1999; Robotham & Julian, 2006). First-year students, in particular, struggle with independent learning, time management, and cultural adjustments. Social stressors such as homesickness, peer competition, and interpersonal conflicts further exacerbate psychological distress (Ross et al., 1999).

Medical students consistently report higher stress levels than non-medical peers, attributed to intensive coursework, frequent assessments, clinical demands, and fear of failure (Dahlin et al., 2005; Dyrbye et al., 2006; Misra & Castillo, 2004). Limited institutional support and maladaptive coping strategies further exacerbate stress.

Research on Ayurveda students, though limited, highlights unique stressors arising from the dual curriculum, classical Sanskrit texts, memorization of traditional terminologies, and integrating ancient concepts with modern biomedical knowledge (Ravikumar et al., 2019; Sharma, Gupta, & Nair, 2017). In addition to academic pressure, students face social adjustments, language barriers, and concerns regarding future employment (Patil, Khandare, & Jadhav, 2021; Jayasuriya & Wijesinghe, 2020).

Gender differences in stress are well-documented, with females often reporting higher stress due to coping styles, role expectations, and emotional expression (Abouserie, 1994; Misra & Castillo, 2004). Stress among university students is typically categorized into academic, social, personal, and environmental domains, influenced by workload, peer relationships, financial difficulties, health issues, and living conditions (Abouserie, 1994; Ross et al., 1999; Kumar & Bhukar, 2013; Kaur & Singh, 2019).

Effective coping strategies, including time management, help-seeking, and social support, mitigate stress, whereas maladaptive strategies like avoidance exacerbate it (Folkman & Lazarus, 1988). Institutional support systems, such as counselling, mentoring, and stress management programmes, are essential but often underutilized due to stigma, lack of awareness, or scheduling conflicts (Perera, Gunathilaka, & Wickramasinghe, 2021). Early identification and targeted interventions can enhance resilience, mental health, and academic performance.

3. Methodology

3.1 Study Design and Setting

A descriptive cross-sectional pilot study was conducted among first-year BAMS students at the Faculty of Indigenous Medicine, University of Colombo, from June to August 2025. The study setting included classrooms, practical laboratories, and clinical demonstration areas, representing diverse academic environments relevant for stress assessment.

3.2 Study Population and Sampling

Sample size estimation was based on the standard formula for calculating sample sizes for prevalence studies:

$$N = \frac{Z^2 \times p(1-p)}{d^2}$$

Where:

Z = 1.65 (critical value for 90% confidence).

p = 0.50 (estimated prevalence of stress, chosen to maximize sample size).

D = 0.047 (absolute precision).

Substituting the values:

$$N = \frac{1.65^2 \times 0.5(1-0.5)}{0.047^2}$$

Total N=300

The target population included 180 first-year students aged 21–24 years. A pilot sample of 30 students (10–20% of the total) was selected using systematic random sampling, ensuring representativeness and minimizing bias.

3.3 Inclusion and Exclusion Criteria

Inclusion criteria were enrollment in the first-year BAMS programme, voluntary participation, and absence of pre-existing psychiatric conditions. Students with prior psychiatric disorders, ongoing stress-related treatment, repeated first-year students, or those absent during data collection were excluded.

3.4 Data Collection Tools

Data were collected using a pretested, self-administered questionnaire comprising:

- Socio-demographic profile
- Academic factors (workload, exams, subject difficulty)
- Psychosocial factors (university adjustment, social support)
- Environmental/economic factors (residence, financial issues)

A composite stress score was constructed based on emotional, physical, academic, and behavioral indicators using a four-point Likert scale (0 = Never to 3 = Very Often). Scores were categorized as low (<40%), moderate (40–60%), high (61–80%), and very high (>80%). The internal consistency of the scale was acceptable (Cronbach's $\alpha = 0.79$).

3.5 Data Collection Procedure

Questionnaires were administered in supervised classroom settings following informed consent and briefing on confidentiality. Completed forms were collected immediately, checked for completeness, coded, and stored securely.

3.6 Ethical Considerations

Ethical clearance was obtained from the Ethical Review Committee of the Faculty of Indigenous Medicine, University of Colombo. Participation was voluntary, and confidentiality was strictly maintained.

3.7 Data Analysis

Data were analyzed using descriptive statistics (percentages, means, frequencies) and inferential analyses, including linear regression, to assess associations between stress and selected variables. Statistical significance was set at $p < 0.05$.

4. Results

4.1 Participant Characteristics

Most participants were female (83.3%) and aged 22–23 years (90%). Over half (56.7%) resided in private boarding houses, with 26.7% living at home and 16.7% in hostels.

4.2 Prevalence of Stress

Moderate stress was reported by 50% of students, high stress by 33.3%, low stress by 13.3%, and very high stress by 3.3%. The most common stress-related symptoms were headache and dizziness (43.3%), followed by anger (20%) and gastrointestinal issues (16.7%).

4.3 Stress Triggers and Frequency

Examination periods were identified as the primary stress trigger (56.7%), with most students experiencing symptoms 1–3 days per week (83.3%).

4.4 Inferential Analysis

Significant associations were observed between stress and:

- Adjustment to university life ($p = 0.012$)
- Social relationships ($p = 0.004$)
- Perceived university support ($p = 0.006$)
- Feeling overwhelmed by academic workload ($p = 0.0008$)
- Financial difficulties ($p = 0.02$)

No significant associations were found with total academic workload ($p = 0.3664$) or staying awake at night ($p = 0.59$).

5. Discussion

Stress among first-year BAMS students is influenced more by psychosocial and environmental factors than by objective academic workload. Students' perception of being overwhelmed was a stronger predictor than actual workload, consistent with the transactional model of stress (Lazarus & Folkman, 1984). Adjustment to university life, social support, and institutional guidance emerged as protective factors. Financial constraints and living away from home contributed significantly to stress, particularly for students from rural backgrounds. Examination periods were the most prominent stress triggers, suggesting targeted interventions during these periods may be beneficial.

These findings align with previous research indicating that stress in medical and health science students is multifactorial, encompassing cognitive appraisal, social connectedness, and institutional support (Dyrbye et al., 2006; Jayasuriya & Wijesinghe, 2020; Misra & Castillo, 2004). Holistic student-centered support, including mentoring, counseling, and stress management programmes, is essential to promote well-being and academic performance.

6. Conclusion

Stress is prevalent among first-year BAMS students at the University of Colombo, with the majority experiencing moderate to high levels. Headache and dizziness were common somatic manifestations, and examination periods were the primary stress trigger. Stress determinants were multifactorial, encompassing psychosocial, environmental, and cognitive appraisal factors rather than academic workload alone. These findings underscore the need for comprehensive strategies integrating academic guidance, emotional support, and financial assistance to enhance student resilience, mental health, and academic outcomes in Ayurveda education.

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