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ASSESSMENT-RELATED STRESS AMONG FIRST-YEAR MBBS STUDENTS: A CROSS-SECTIONAL STUDY

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Abstract

Background: Assessment is an integral component of competency-based medical education and is intended to facilitate continuous learning, self-directed study, and competency development. However, frequent internal assessments, extensive syllabus coverage, and inadequate preparation time may contribute to academic stress, particularly among First MBBS students.

Aim: To study the assessment-related stress among First MBBS students, identify major assessment-related stressors, and explore factors that may reduce stress and improve academic confidence.

Materials and Methods: A cross-sectional, questionnaire-based study was conducted among 150 First MBBS students. Institutional Ethics Committee approval was obtained, and informed consent was secured from all participants. A structured, self-designed questionnaire assessed assessment frequency, syllabus load, adequacy of preparation time, performance pressure, feedback, and faculty support. Responses were recorded using a five-point Likert scale. Data were analyzed using descriptive statistics.

Results: Approximately 72% (108/150) of students perceived internal assessments as moderately to highly stressful. The major reported stressors were extensive syllabus coverage (74%), frequent assessments (68%), and short gaps between examinations (61%). Assessment-related stress was perceived to affect concentration in 58% of students, sleep in 46%, memory in 42%, and overall academic performance in 39%. Adequate preparation time (65%), constructive and timely feedback (71%), and supportive teacher guidance (69%) were identified as factors that helped reduce stress and improve confidence.

Conclusion: Assessment-related stress is common among First MBBS students. Extensive syllabus coverage, frequent assessments, and short intervals between examinations were the major perceived stressors. Optimizing assessment frequency and spacing, providing adequate preparation time, ensuring timely constructive feedback, and strengthening faculty mentoring may reduce assessment-related stress and promote effective learning.

Keywords: Assessment, Academic stress, First-year medical students, Medical education

Introduction

Medical education is a demanding academic and professional training process requiring students to acquire extensive theoretical knowledge, practical skills, clinical competencies, communication abilities, and professional attitudes. The transition into medical school can be particularly challenging because students must adapt to a large curriculum, new learning strategies, and continuous academic evaluation. Psychological distress, including stress and anxiety, has been reported frequently among medical students. Systematic reviews have demonstrated substantial levels of psychological distress among medical students and have highlighted the need to address student well-being as an important component of medical education.[1],[2]

In India, the introduction of competency-based medical education (CBME) has emphasized learner-centred education, continuous assessment, self-directed learning, feedback, and progressive acquisition of competencies.[3] Assessment is therefore an essential component of undergraduate medical education and serves not only to measure achievement but also to identify learning gaps and guide further learning. However, when assessments are frequent, closely spaced, or tied to extensive syllabus requirements, they may become a major source of academic stress.[3],[4]

Academic assessment has been specifically associated with psychological distress among medical students. A systematic review by Lyndon et al. reported consistent evidence that academic assessment can provoke stress or anxiety and suggested a possible relationship between assessment-related distress and impaired academic performance.[5] The authors also emphasized the heterogeneity of assessment methods and recommended further research using standardized approaches to understand assessment-related distress.

Medical students experience multiple sources of stress, including academic workload, examinations, competition, curriculum demands, and concerns regarding academic performance.[6],[7] Studies conducted in India have demonstrated that academic stress is common among undergraduate medical students. In a study from Tamil Nadu involving 750 medical students, academic factors constituted important sources of stress, highlighting the need to understand and address academic stressors within the medical curriculum.[7]

Stress can affect several cognitive and behavioural functions relevant to learning. High levels of stress may interfere with concentration, memory, sleep, motivation, and academic functioning. Psychological distress among medical students has also been associated with adverse educational and personal consequences.[1],[2],[8] Therefore, assessment practices should be designed with consideration not only for their ability to measure learning but also for their potential effect on student well-being.

The manner in which assessment is conducted may influence students' perception of stress. Excessive assessment frequency and inadequate intervals between examinations may limit opportunities for adequate preparation and recovery. Conversely, adequate preparation time, timely feedback, and supportive faculty interaction may help students interpret their performance constructively and develop confidence. Feedback is recognized as an important component of effective health professions education.[9] A systematic review and meta-analysis found that feedback interventions were associated with improved educational outcomes among medical students.[10]

Effective feedback can help students recognize gaps between their current performance and expected standards and guide subsequent learning.[9],[10] Formative assessment and feedback are therefore particularly relevant within CBME, where assessment is intended to support progressive competency development rather than merely classify students according to examination scores.

Despite extensive literature on general academic stress among medical students, relatively fewer studies have specifically explored assessment-related stress among First MBBS students, including the perceived contribution of syllabus burden, assessment frequency, short examination intervals, preparation time, feedback, and faculty support.

The present study was therefore undertaken to assess the perception of assessment-related stress among First MBBS students, identify major assessment-related stressors, and explore factors perceived by students to reduce stress and enhance academic confidence.

AIM

To study the assessment-related stress among First MBBS students and identify major perceived stressors and protective factors associated with internal assessments.

Materials And Methods

Study Design and Setting

A cross-sectional questionnaire-based study was conducted among First MBBS students at a state government medical college

Study Participants

A total of 150 First MBBS students participated in the study. Students who consented to participate were included in the study.

Ethical Considerations

Institutional Ethics Committee approval was obtained before commencement of the study. Written informed consent was obtained from all participants. Participation was voluntary, and confidentiality of the responses was maintained.

Parameters

A structured, self-designed questionnaire was used to assess students' perceptions regarding internal assessments. The questionnaire covered assessment frequency, syllabus load, adequacy of preparation time, performance pressure, quality and timeliness of feedback, and faculty support. Students were also asked to report the perceived effects of assessment-related stress on concentration, sleep, memory, and overall academic performance. Responses were recorded using a five-point Likert scale ranging from strongly disagree to strongly agree.

Data Collection

The questionnaire was administered to the students after explaining the purpose of the study. Students were encouraged to respond based on their experience of internal assessments.

Statistical Analysis

Data were analysed using descriptive statistical methods. Categorical responses were expressed as frequencies and percentages. The proportion of students reporting assessment-related stressors, perceived effects of stress, and protective factors was calculated.

As the present study was primarily descriptive, inferential statistical tests were not performed. No causal relationships were inferred from the findings.

Results

A total of 150 First MBBS students participated in the study. Of the 150 students, 108 (72%) perceived internal assessments as moderately to highly stressful.

Major Assessment-Related Stressors

The most frequently reported stressor was extensive syllabus coverage, reported by 74% of students. This was followed by frequent assessments (68%) and short gaps between examinations (61%).

Perceived Impact of Assessment-Related Stress

Assessment-related stress was perceived to affect several domains of students' academic functioning and well-being. 58% of students reported lack of concentration, while 46% reported lack of or disturbed sleep. 42% reported impaired memory, and 39% perceived an adverse effect on their overall academic performance.

Factors Perceived to Reduce Stress

Students identified several educational factors that helped reduce assessment-related stress. 65% reported that adequate preparation time helped reduce stress. 71% identified constructive and timely feedback as beneficial, while 69% reported that supportive teacher guidance helped reduce stress and improve academic confidence. The findings are consistent with the original study data presented in the conference poster.

Discussion

The present study found that 72% of First MBBS students perceived internal assessments as moderately to highly stressful, indicating that assessment is an important component of the academic stress experienced by students. This observation is consistent with previous literature demonstrating that medical education is associated with considerable psychological distress.[1,2]

Academic assessment itself may represent an important source of stress. Lyndon et al., in a systematic review, reported consistent evidence that academic assessments invoke stress or anxiety among medical students and suggested that assessment-related distress may be associated with impaired academic performance [5]. The findings of the present study support the importance of considering the psychological consequences of assessment when designing undergraduate medical curricula.

In our study, extensive syllabus coverage (74%) was the most frequently reported stressor, followed by frequent assessments (68%) and short gaps between examinations (61%). Similar academic stressors have been reported in studies of medical students, where examinations, academic workload, and curriculum-related demands were prominent contributors to stress [6,7]. These findings suggest that students may perceive the cumulative assessment burden, rather than assessment alone, as a major source of stress.

The reported effects on concentration, sleep, and memory are particularly relevant to medical education. More than half of the students reported lack of concentration, while nearly half reported sleep-related difficulties. Stress and psychological distress can interfere with cognitive functioning and learning, potentially creating a cycle in which academic difficulties further increase stress [5,8]. However, because the current study was cross-sectional and based on self-reported perceptions, these findings should not be interpreted as demonstrating a causal relationship.

An important finding was the perceived beneficial effect of timely and constructive feedback, reported by 71% of students. Feedback is an essential element of effective medical education because it provides learners with information regarding their performance and helps guide future learning.[9] A systematic

review and meta-analysis of randomized controlled trials reported that feedback interventions were associated with improved knowledge, attitudes, and skills among medical students.[10] Thus, feedback following internal assessments should be viewed as an educational intervention rather than merely communication of examination marks.

Similarly, 69% of students identified supportive teacher guidance as helpful, suggesting an important role for faculty mentoring. Supportive faculty interactions may help students understand expectations, prioritize learning, interpret assessment performance, and develop confidence.

The finding that 65% of students considered adequate preparation time beneficial has practical implications for assessment scheduling. Excessive clustering of examinations may restrict preparation time and increase perceived academic burden. A balanced assessment calendar, adequate intervals between assessments, and predictable scheduling may therefore help students approach assessments as opportunities for learning rather than solely as high-pressure events.

The findings are particularly relevant to CBME, in which assessment should promote learning and competency development.[3],[4] Assessment practices should ideally integrate formative opportunities, constructive feedback, and opportunities for remediation. The present findings suggest that curriculum planners and faculty members should consider student workload and well-being while maintaining appropriate assessment standards.

Conclusion

Assessment-related stress is common among First MBBS students. Adequate preparation time, constructive and timely feedback, and supportive teacher guidance were perceived as important factors in reducing stress and improving academic confidence. A balanced approach to internal assessment is therefore recommended. Assessment schedules should avoid unnecessary clustering, provide adequate preparation time, and incorporate timely formative feedback. Faculty mentoring and academic support should also be strengthened to help students cope with academic demands while achieving the competencies expected from undergraduate medical education.

Limitations of the Study

The study has a few limitations. It is a single-centre setting, limiting causal inference and generalizability. Use of a self-designed questionnaire may limit validity, while self-reported responses may introduce bias. Descriptive statistics prevented assessment of associations, and subgroup differences based on sex, socioeconomic status, academic performance, and other demographic factors were not evaluated.

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Conflict Of Interest: Nil

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Table 1. Major assessment-related stressors among First MBBS students

Assessment-related stressor	Students (%)
Extensive syllabus coverage	74
Frequent assessments	68
Short gaps between examinations	61

Table 2. Perceived impact of assessment-related stress

Perceived impact	Students (%)
Lack of concentration	58
Lack of/disturbed sleep	46
Impaired memory	42
Effect on academic performance	39

Table 3. Factors perceived to reduce assessment-related stress

Protective factor	Students (%)
Adequate preparation time	65
Constructive and timely feedback	71
Supportive teacher guidance	69