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Original Research Article

Knowledge, Attitude and perception of anxiety and stress among undergraduate dental students

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ABSTRACT

Objective: This research endeavours to examine the levels of knowledge, attitude, and perception related to anxiety and stress among undergraduate dental students. The challenging and demanding nature of dental education may contribute to elevated stress levels among students, making it imperative to comprehend the factors influencing anxiety and stress. This study aims to provide insights that can guide the development of targeted interventions to enhance the mental well-being of dental students.

Materials and Methods: A cross-sectional study was conducted using a structured questionnaire to gather data from undergraduate dental students. The questionnaire encompasses demographic details, academic-related stressors, awareness of mental health resources, coping mechanisms, and perceptions regarding anxiety and stress in dental education. The data was subjected to statistical analysis to identify patterns and associations.

Results: Findings include revelations about the prevalence and severity of anxiety and stress among dental students, factors contributing to heightened stress levels, and the efficacy of existing coping mechanisms. The study also aims to assess the awareness and utilization of mental health resources within the dental education community.

Conclusion: This research aims to contribute valuable insights to the existing body of literature on the mental health of undergraduate dental students. The results may inform educational institutions and policymakers about potential areas for improvement in support services and interventions to alleviate anxiety and stress levels among dental students. Ultimately, enhancing the overall well-being of dental students is crucial for their academic success and personal growth.

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1. Introduction

In the realm of higher education, the pursuit of dental education is renowned for its demanding and rigorous nature, often subjecting students to heightened levels of stress¹ and anxiety. The intricate balance between academic responsibilities, clinical requirements, and personal well-being places dental students at the nexus of challenges that can significantly impact their mental health. As the

importance of addressing mental health concerns within academic settings gains recognition, it becomes imperative to delve into the knowledge, attitude, and perceptions surrounding anxiety and stress among undergraduate dental students.²⁻⁴

This research aims to fill a crucial gap in the existing literature by conducting a cross-sectional study that systematically investigates the multifaceted aspects of anxiety and stress within the context of dental education. Current research focusing on the mental well-being of dental students in India is limited. This study investigates

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the anxiety and stress levels experienced by undergraduate dental students of our state that is Uttarakhand, including those in clinical and pre-clinical stages. Additionally, it explores coping mechanisms and strategies to alleviate workplace stress. By examining these factors, the study aims to illuminate the challenges faced by dental students and offer practical recommendations to improve their mental health. This research contributes valuable insights into the mental health landscape within the Indian dental student community.

The primary aim of this study is to evaluate anxiety and stress levels^{5,6} among undergraduate dental students. By comprehensively exploring the levels of awareness, attitudes towards mental health resources, and individual perceptions of stressors,⁷ this study endeavours to provide nuanced insights that can inform tailored interventions and support systems.

The significance of this research lies in its potential to shed light on not only the prevalence and severity of anxiety and stress among dental students but also on the effectiveness of current coping mechanisms^{8–10} and the utilization of available mental health resources. By fostering a deeper understanding of these dynamics, educational institutions and policymakers can formulate targeted strategies to enhance the overall well-being of undergraduate dental students.

In the subsequent sections, we will detail the methodology⁷ employed in this cross-sectional study, present the anticipated findings, and discuss the implications of the research in the broader context of promoting mental health and resilience among dental students.

1.1. Inclusion criteria

1. Undergraduate dental students enrolled in accredited dental institutions in India.
2. Both clinical and pre-clinical students are eligible.
3. All genders and age groups of students are considered.
4. Voluntary participation and informed consent from students are required.
5. Anonymous filling of questionnaire.

1.2. Exclusion criteria

1. Postgraduate dental students.
2. Severe cognitive impairments or language barriers preventing questionnaire completion.
3. Students who decline participation or withdraw consent.

2. Materials and Method

2.1. Study design

This research adopted a cross-sectional study design¹¹ to assess anxiety and stress levels among undergraduate

dental students. The study utilized a self-administered questionnaire to collect data on various aspects related to stress,¹² coping mechanisms,⁹ and the impact of stress on academic performance.

2.2. Participants

Undergraduate dental students from diverse dental colleges participated in the study, with 305 responses collected to ensure a robust dataset for analysis.

2.3. Questionnaire development

The questionnaire was crafted to comprehensively capture information on anxiety and stress without incorporating specific scales. It included sections on demographic details, academic-related stressors¹³, coping mechanisms,⁸ and perceptions regarding anxiety and stress in dental education. Participants responded to open-ended questions, providing qualitative insights.

2.4. Data collection

Data collection occurred through electronic distribution of the questionnaire to participants. Prior to participation, individuals were briefed on the study's purpose, and informed consent was obtained. Confidentiality of responses was ensured.

2.5. Measures

The questionnaire covered:

1. Demographic information (e.g., age, gender, year of study).
2. Academic-related stressors (e.g., workload, exams, clinical requirements).
3. Coping mechanisms employed by students to manage stress.
4. Perception of the impact of stress on academic performance.

2.6. Data analysis

Quantitative data underwent manual analysis via pie charts and bar graphs, summarizing demographics. Thematic analysis was employed for qualitative insights from open-ended responses, providing a holistic view of stressors and coping mechanisms among undergraduate dental students.

2.7. Ethical considerations

The study strictly adhered to ethical guidelines. Participants were guaranteed confidentiality and anonymity. Informed consent was secured, and participants were informed of their right to withdraw from the study at any point.

The material and methods thus employed in this study, devoid of specific scales, aimed to gain a comprehensive

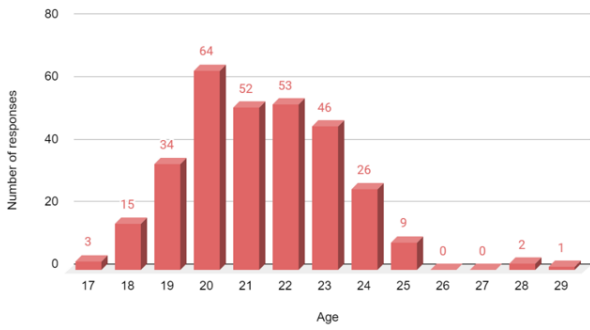


Figure 1: Age

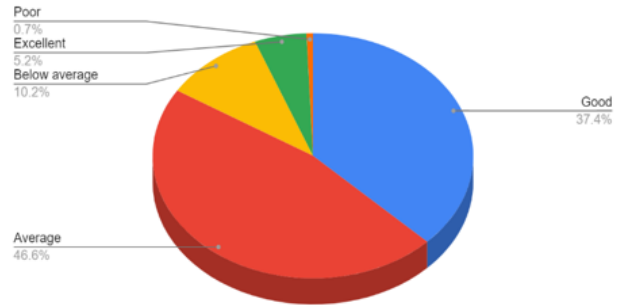


Figure 4: Rate your overall academic performance?

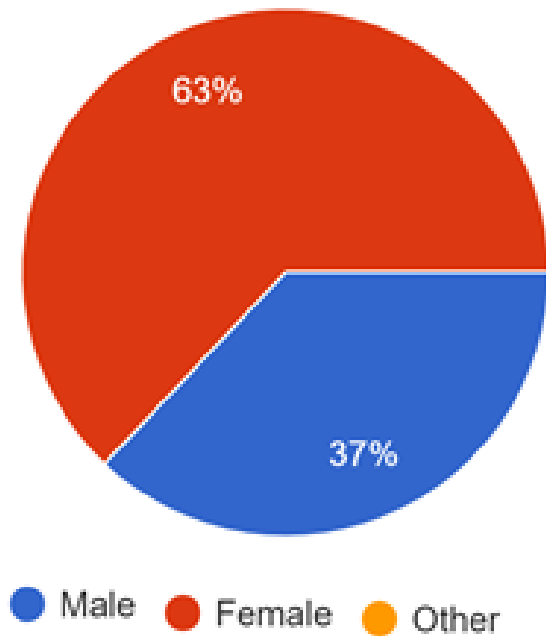


Figure 2: Gender

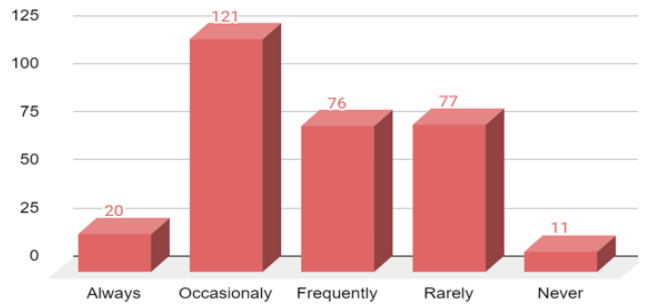


Figure 5: Anxiety related to the academic workload

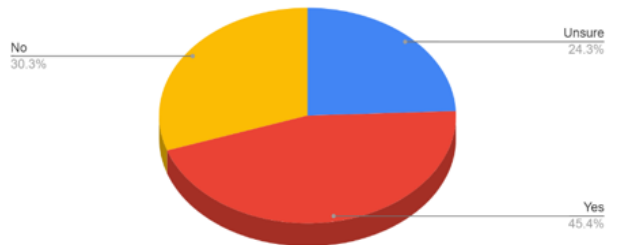


Figure 6: Comfortable seeking help or support for your anxiety related concerns within the dental school environment

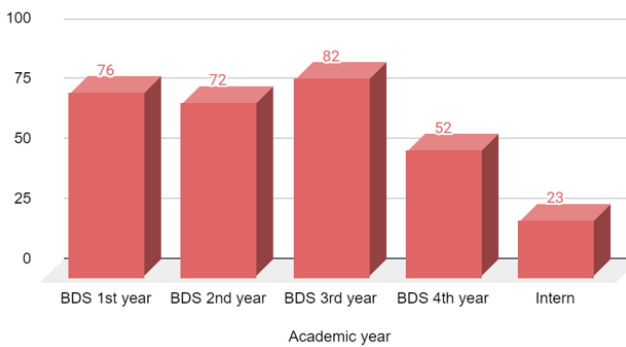


Figure 3: Academic year

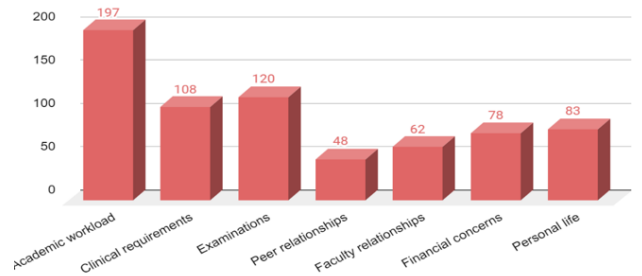


Figure 7: Main source of stress among undergraduate students

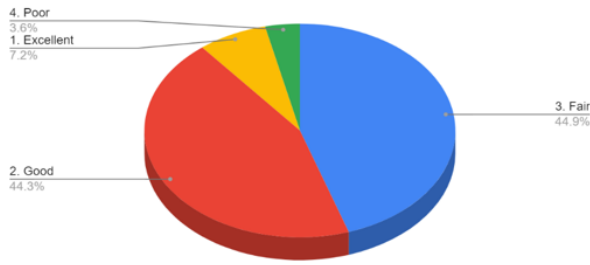


Figure 8: Overall well-being as a dental student

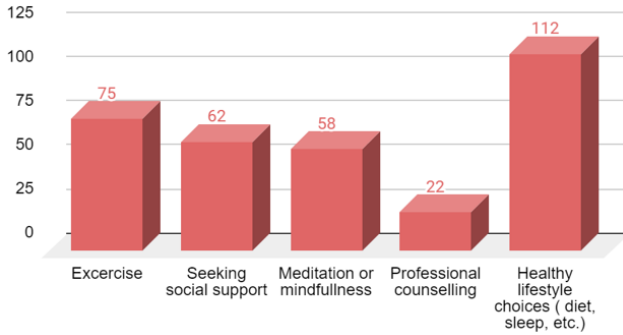


Figure 9: Coping strategies

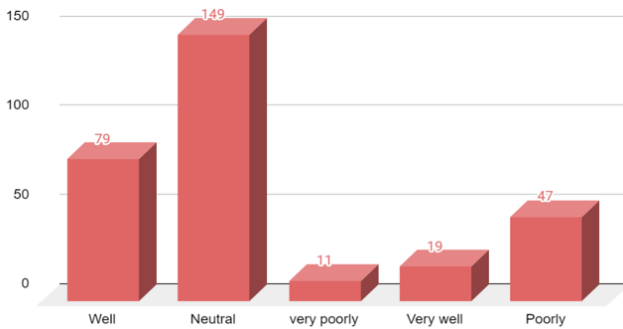


Figure 10: Management of time between personal life and academics

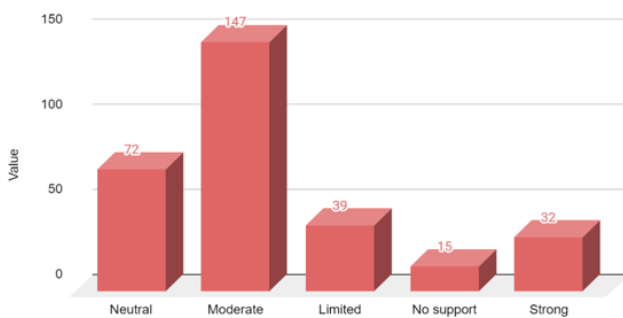


Figure 11: Level of support you receive from your classmates, friends and faculty members within the dental school community

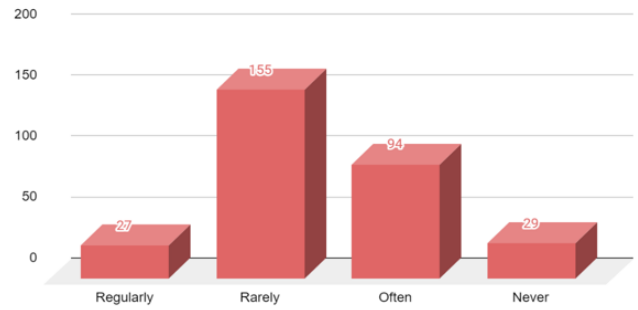


Figure 12: Any physical health symptoms (e.g headaches, sleep disturbances, etc.) related to stress and anxiety

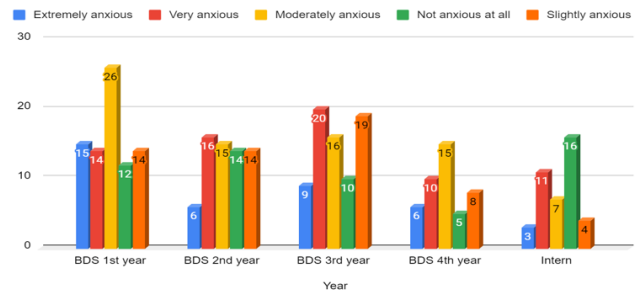


Figure 13: Anxiety related to future career in dentistry

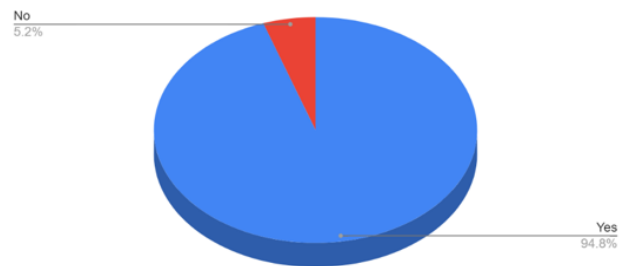


Figure 14: Mental awareness programmes will help dental students

understanding of anxiety and stress among undergraduate dental students. The use of a questionnaire with open-ended responses facilitated the collection of both qualitative and limited quantitative data, allowing for a nuanced analysis of stressors and coping mechanisms within the dental education context.

3. Result

Quantitative analysis revealed diverse stressors among undergraduate dental students, with examinations, academic workload, and faculty relations being primary contributors. Coping mechanisms varied, emphasizing the importance of time management, incorporating healthy life choices, exercise, and seeking social support from peers and faculty. Notably, students who reported higher engagement in

these adaptive coping strategies demonstrated a statistically significant correlation with lower perceived stress levels. The survey also indicated a positive association between participation in awareness programs and reduced anxiety, emphasizing the potential impact of such initiatives on alleviating stress among dental students. This finding underscores the relevance of holistic well-being strategies and targeted awareness efforts in dental education.

4. Discussion

The outcomes of this study contribute a comprehensive understanding of the stress landscape among undergraduate dental students. The identified stressors, encompassing examinations, academic workload, and faculty relations, echo the well-documented challenges intrinsic to dental education.⁷ The diverse coping mechanisms employed by students, such as effective time management, embracing healthy lifestyle choices, engaging in regular exercise, and seeking social support, underscore the adaptability and resilience within the student population.

Notably, the study highlights the potential impact of awareness programs on reducing anxiety among dental students. The positive association between participation in such programs and decreased anxiety levels¹³ signifies the value of targeted interventions aimed at augmenting student's awareness of stress management resources and support systems. Integrating these programs into the educational curriculum could not only foster a more supportive learning environment but also instill a proactive approach toward mental health.¹⁴ This study provides valuable insights into the intricate relationship between stress, coping mechanisms, and the potential benefits of awareness programs among undergraduate dental students. By identifying stressors and emphasizing coping strategies, the study lays a foundation for tailored interventions that prioritize the holistic well-being of dental students, fostering an environment conducive to academic success and overall quality of life.

To alleviate workplace stress among undergraduate dental students, several recommendations can be implemented. Introduce stress management workshops tailored to dental education demands, providing techniques such as mindfulness and time management skills. Enhance faculty support and communication channels for open dialogue and guidance, along with training on recognizing stress signs. Ensure access to mental health resources, including counseling services and support groups. Offer academic support services like tutoring and study skills workshops. Promote self-care practices such as exercise and hobbies. Provide clear guidelines and feedback mechanisms for coursework and clinical responsibilities, evaluating workload and scheduling. Continuously monitor and evaluate interventions, soliciting feedback for ongoing improvement in creating a supportive environment for

stress management among undergraduate dental students.¹⁵

It is crucial to acknowledge the study's limitations, including the reliance on self-reported data¹⁶ and the potential for selection bias. Future research endeavours could delve deeper into the effectiveness of specific intervention programs, considering long-term outcomes on the mental health and well-being¹⁴ of dental students.

The questionnaire was in the google form that constituted of 15 questions including demographic details, which were sent via online platforms. The google form included questions that enquired the stress, sources of stress, anxiety and coping mechanism.

Our study tried to limit the bias by including close ended questions which require self reporting. There was no intervention by the interviewer which could have caused misunderstanding in communication exchange between the researcher and respondent.

5. Conclusion

In culmination, this study delves into the complex realm of stress among undergraduate dental students, unravelling a tapestry of challenges including examinations, academic workload, and faculty relations.⁷ The diverse coping mechanisms employed by students, from effective time management to embracing healthy lifestyle choices, underscore the resilience within this student cohort.

Notably, the positive association between participation in awareness programs and reduced anxiety signifies the potential impact of targeted interventions on students' mental well-being. Integrating such initiatives into the curriculum emerges as a proactive strategy to cultivate a supportive learning environment.

Despite the study's limitations, including self-reported data¹⁶ reliance and potential selection bias, it lays a foundation for future research and interventions. As we navigate the evolving landscape of dental education, understanding stressors and promoting effective coping mechanisms remains imperative.

In essence, this study provides actionable insights for educators, administrators, and policymakers to develop holistic support systems that prioritize the mental well-being¹⁴ of undergraduate dental students.¹¹ By fostering an environment that acknowledges and addresses stressors⁹ while promoting adaptive coping strategies,⁸ we can contribute to a healthier, more resilient future for the next generation of dental professionals.

Coping mechanisms for stress and anxiety among undergraduate dental students involve effective time management, prioritizing tasks, and allocating time for study, clinical work, and relaxation. Mindfulness and relaxation techniques, such as meditation and deep breathing exercises, promote relaxation and reduce stress levels. Building social support networks with peers, faculty, and mentors provides emotional support and validation.

These supportive relationships align with Lazarus and Folkman's emphasis on seeking social support as a coping strategy. Encouraging healthy lifestyle choices, including a balanced diet, regular exercise, and sufficient sleep, enhances overall well-being and resilience to stress. Setting realistic expectations reduces perfectionism and feelings of inadequacy. Fostering positive thinking patterns and resilience-building techniques enables students to reframe negative thoughts and focus on strengths, enhancing their ability to cope with stress and adversity. Together, these coping mechanisms provide a comprehensive framework for managing stress among undergraduate dental students.¹⁷

6. Source of Funding

None.

7. Conflicts of Interest

There are no conflicts of interest.

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