



Obstacles Faced by Dental Postgraduates: A Gender-Based Analysis

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ABSTRACT:

Introduction: Dental postgraduates face a variety of challenges during their advanced training. These obstacles can be broadly categorized into academic, financial, clinical, and personal challenges

Objectives: This study aims to assess the challenges faced by dental students during post graduation based on gender. This study investigates the experiences of dental postgraduate students in TamilNadu, with a focus on gender dynamics.

Methods: A cross-sectional survey was conducted among 140 participants, comprising 70 male and 70 female postgraduates. Questionnaires consists 10 items were distributed using a stratified random sampling method. Descriptive statistics were employed to analyze the data, utilizing IBM SPSS software. The findings shed light on the challenges and opportunities faced by dental postgraduates, offering insights into gender-based differences in their educational journey.

Results: There was a statistically significant association was found between inadequate time and personal health negligence with gender

Conclusions: In dental postgraduate education, women exhibit a strong determination to achieve success and independence, driven by their individual aspirations rather than external pressures. Despite facing obstacles, they remain resolute in their pursuit of becoming proficient professionals.

1. Introduction

Healthcare professionals worldwide, regardless of gender, grapple with common challenges such as time pressures, heavy workloads, juggling multiple roles and coping with emotional issues. This responsibility extends to dental postgraduate students who are also expected to adhere to professional ethics. Dental colleges play a crucial role in ensuring that these students are adequately prepared for the responsibilities they will undertake in their careers. To achieve this, dental colleges employ a variety of teaching methods including lectures, simulations, supervised practice, mentoring and hands-on experience to enhance students knowledge and skills. However, dental school is often where stress begins for aspiring dentists with numerous studies from the United

Kingdom, the United States and Australia indicating high levels of perceived stress among dental students.

[1] Regrettably, certain facets of the training process inadvertently impact the physical and emotional well-being of postgraduate students. Many experience heightened personal distress, leading to detrimental effects on academic performance, competency, professionalism, and overall health.

From the outset of their training, dental students undergo bodily alterations due to the demanding nature of preclinical and clinical setups, compounded by academic pressures. While some degree of adaptation is expected in dental training and may serve as motivation for some, not all students find the scheduled workload manageable.



[2] The emotional toll experienced by dental postgraduate students encompasses feelings of fear, incompetence, uselessness, anger and guilt with far-reaching consequences for both psychological and physical health. This burden manifests in various health issues including cardiovascular problems at a young age, gastric disorders due to irregular eating habits, thyroid complications, irregular menstruation leading to insomnia, skin and hair problems, obesity, musculoskeletal issues and increased alcohol consumption during weekends. In later stages, students may withdraw socially, engage in self-criticism and experience negative consequences such as depression, anxiety and poor mental health. Nevertheless, employing effective coping strategies such as problem-solving, positive interpretation and social support can foster healthier adaptations. Women particularly may experience heightened responsibility and balancing professional success with maternal roles. Stress manifests in numerous ways including fatigue, tension, dizziness, sleep disturbances, rapid heartbeat, gastrointestinal symptoms, irritability, anxiety and hostility towards peers.

[3] Stress has been found to have a detrimental impact on the academic performance of dental students.

[4] Previous studies on dental student stress have overlooked the influence of parental involvement. In Asian cultures, where strong family bonds persist throughout life, individuals can rely on their families for both emotional and material support during times of crisis. This support network likely contributes to the notably low suicide rates observed in Asian countries. However, the downside of these close familial ties is the potential need to prioritize family interests over one's own.

[5] While women are notably more inclined than men to pursue academic careers, there remains a stark disparity in the progression to senior ranks between genders.

[6] For many married women dentists, effectively balancing the demands of work and home life is a paramount concern. Often, these roles are intertwined and making it challenging to delineate between them. While marriage tends to correlate with reduced stress for male dentists and it often leads to increased stress for women, particularly those who bear primary

responsibility for managing household tasks such as cooking, cleaning and shopping. Even when delegating these duties, women typically remain responsible for overseeing the process, including interviewing, hiring and managing assistants. Challenges within marriages for women dentists may include experiences of domestic abuse, feelings of deep guilt due to busy schedules, diminished self-esteem, difficulties in spending quality time with loved ones and resentment stemming from the perception of bearing the bulk of emotional labor within the relationship.

[7] Taking care of one's well-being by prioritizing nutrition, rest, exercise and setting boundaries is crucial for managing stress. Engaging in hobbies and allowing oneself to "waste time" for personal happiness fosters balance. Balancing solitude and social interaction while maintaining open communication and aids efficiency. Financial management is vital pre- and post-graduation, as money-related stress can hinder necessary changes. Life is a series of phases, requiring adaptation and acceptance of sacrifices made for the present moment. Moving forward allows for reflection, new choices and shifting priorities. Awareness of attitudes perpetuating stress is essential for both genders. Two significant factors contributing to stress are guilt and the pursuit of perfection. Guilt arises when one feels they are falling short of expectations, often tied to the unrealistic standard of perfection. It's crucial to recognize and release guilt to prioritize personal needs effectively. Perfection and an unattainable ideal can hinder happiness. Embracing the understanding that excellence, not perfection, is the path to success and that being the best version of oneself is superior and promotes a healthier mindset. [8] However, it ultimately hinges on the individual's risk perspective regarding their personal and professional pursuits. The current research focused to assess the hindrances faced by dental students undergoing postgraduation.

2. Objectives

- Assess whether there are differences in academic pressures and performance expectations based on gender.
- Evaluate if there are gender-specific barriers to accessing research opportunities and academic resources.



- Compare the financial burdens and available financial support systems for male and female dental postgraduates.
- Investigate whether there are disparities in access to scholarships, grants, and other forms of financial aid.
- Explore any gender-based discrepancies in clinical training opportunities and hands-on experience.
- Identify if there are differences in mentorship and supervisory support provided to male and female students.
- Investigate the impact of postgraduate studies on work-life balance and personal relationships for different genders.
- Evaluate the prevalence and causes of stress and burnout among male and female dental postgraduates.
- Review the effectiveness of institutional policies and support systems in addressing gender-specific challenges.
- Assess the availability and utilization of gender-specific counseling and mental health services.

3. Methods

A questionnaire-based cross-sectional survey was conducted among 140 dental postgraduate students, evenly distributed between male and female participants. The surveys were administered at various dental colleges across TamilNadu using a stratified random sampling technique. The sample size was determined based on expected prevalence resulting in a final estimated sample size of 140. Ethical approval for the study was obtained from the Institutional Review Board of Sree Balaji Dental College and Hospital. Inclusion criteria encompassed postgraduate students with no prior history of depression or psychological issues, who were continuously pursuing their postgraduation for a period of three years without any breaks. Exclusion criteria applied to individuals unwilling to participate in the study. The survey covered a wide range of topics including health issues faced by participants after joining postgraduation, satisfaction with work, peer pressure affecting efficiency in both genders, marital status (pre- and post-marriage), opinions regarding effective age and motives for pursuing postgraduation. Post-marriage hindrances faced by women were also noted with participants assured of anonymity. Content validation of the questionnaire was conducted by three experts in the

field of public health dentistry. The collected data was analyzed using descriptive statistics and Chi-square test.

4. Results

Fig 1: Percentage-wise distribution of Gender

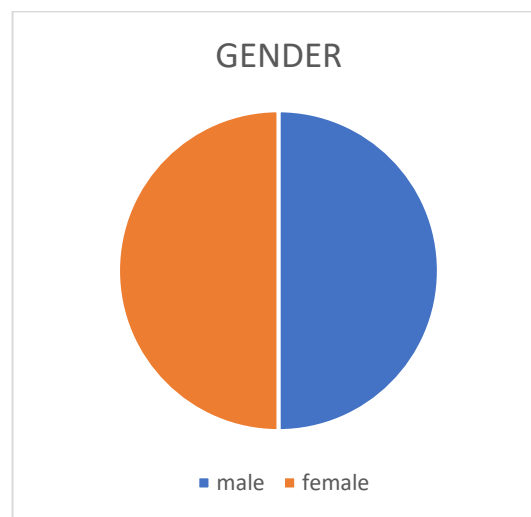


Table 1: Descriptive statistics of specialties in Dentistry

Specialties in Dentistry	Frequency (n)	Percentage (%)
Oral medicine	19	13.6%
Oral pathology	20	14.3%
Conservative dentistry	19	13.6%
Oral and Maxillofacial Surgery	12	8.6%
Public Health Dentistry	12	8.6%
Periodontics	23	16.4%
Orthodontics	15	10.7%
Prosthodontics	7	5.0%
Pedodontics	13	9.3%

Table 1 depicts the frequency and percentage of various specialties participated in the study

**Table 2:** Association of Gender with Stress related factors among Post graduate students

Questionnaire	GENDER% (Male)			Gender (%) (Female)			P value
	Mild stress	Moderate stress	Severe stress	Mild stress	Moderate stress	Severe stress	
Fear of unemployment	45.7%	45.7%	8.6%	34.3%	48.6%	17.1%	0.2
Pattern of University examinations	54.3%	40.0%	5.7%	44.3%	47.1%	8.6%	0.4
Criticism for staff for Academic/ Clinical work	45.7%	45.7%	8.6%	35.7%	48.6%	15.7%	0.3
Politics by faculty	48.6%	41.4%	10.0%	35.7%	48.6%	15.7%	0.2
Inadequate time for assigned work	48.6%	45.7%	5.7%	34.3%	48.6%	17.1%	0.05*
Difficulty in understanding subject	47.1%	42.9%	10.0%	41.4%	47.1%	11.4%	0.7
Neglect for personal health	51.4%	42.9%	5.7%	35.7%	47.1%	17.1%	0.04*
Financial	34.3%	45.7%	20.0%	37.1%	47.1%	15.7%	0.7
Lack of Confidence in research	35.7%	48.6%	15.7%	34.3%	50.0%	15.7%	0.9
Necessity to postponement of marriage or children	44.3%	45.7%	10.0%	38.6%	52.9%	8.6%	0.6

5. Discussion

The motivations for pursuing dentistry have largely remained consistent across time and geographical regions. However in India, the dental profession faces unique challenges such as attrition from the dental workforce. Exploring the connection between the reasons for entering dentistry and the profession's challenges is vital for effectively utilizing trained dental professionals, maintaining the profession's status and optimizing outcomes. Similarly, in the UK, factors influencing undergraduate dental students career choices have not been thoroughly investigated, contrasting with studies conducted in other countries. Understanding these factors is crucial for informing strategies to address workforce needs and enhance the dental profession in the UK.[9] In a 2007 study [10] comparing the perspectives of Japanese, Canadian and Thai undergraduate dental students, findings

revealed varying preferences regarding specialization. Specifically, 48.4% of Canadian students, 38.8% of Japanese students and 39.3% of Thai students expressed a preference for specialization. Factors such as high student debt and costly tuition fees in Canada tended to steer students towards general dentistry. In contrast, for Japanese students, inheriting a family dental practice emerged as the most influential factor discouraging specialization. On the other hand, Thai students cited improved financial prospects as the primary reason for pursuing a specialty career. These insights highlight the diverse influences shaping undergraduate dental students career choices across different countries. Among Canadian and Japanese participants, Orthodontics emerged as the most preferred specialty, whereas Thai students showed a preference for Oral Surgery. In a subsequent study, tendencies for specialization among final-year Japanese



and Swedish dental students were examined. Results indicated that only 16.7% of Japanese students compared to 37.2% of Swedish students expressed an interest in specialization, consistent with previous findings suggesting a majority of Japanese students favoring general practice. Among those interested in specialization, approximately one-third in both countries had not yet selected a specialty. However, Orthodontics remained the top choice among Japanese students, while Oral Surgery was favored by Swedish students. The primary motive for Swedish students pursuing a specialty career was increased financial prospects. These findings underscore the divergent preferences and motivations driving dental students' career choices across different countries. [11]

In the USA, research indicated that the primary motivation for dental undergraduates seeking specialization was their possession of special skills or talent, rather than financial considerations. Additionally, Orthodontics remained the most preferred specialty among students. [12] Interestingly, gender was not found to be a significant determinant in specialty selection, aligning with previous studies. These findings underscore the diverse factors influencing career choices among dental students and highlight the importance of individual skills and interests in driving specialization preferences. [13] However, recent research conducted among fourth-year dental students at another institution in the USA revealed that gender did indeed play a role in specialty selection. Males were seven times more likely to pursue Oral and Maxillofacial Surgery, while females showed a fourfold inclination towards Paediatric Dentistry. Interestingly, the major influencing factor for choosing a postgraduate educational direction was the enjoyment of providing care. These findings highlight the evolving dynamics influencing specialty choices among dental students and emphasize the importance of individual interests and preferences in career decisions. [14] The Annual American Dental Education Association [15] found that from 1995 to 2004, Orthodontics was the most popular specialty among senior dental students in all dental schools across the USA, followed by Oral and Maxillofacial Surgery and Paediatric Dentistry. Notably, these three specialties—Orthodontics, Oral and Maxillofacial Surgery and Paediatric Dentistry—were also the most commonly offered postgraduate courses by both American and Canadian dental schools [16]. Research has been conducted on the career plans and interests of UK dental undergraduates, but it's important to

note that these students have yet to experience professional life after qualification. Therefore, it's understandable that many may still be uncertain about their career path.

For current dental undergraduates, the time-consuming process of acquiring a postgraduate qualification emerged as a major deterrent factor, consistent with previous research. In the UK, dentists are not eligible to apply for specialist training until at least 2 years post-qualification, with further training potentially spanning 5 additional years. Maintaining a healthy work-life balance, especially for those with families, may pose a challenge leading many to reconsider pursuing a specialist career. The amount of additional studying required was also a significant deterrent factor and considering that dental students have already spent approximately 20 years in full-time education, making the prospect of further extensive study less appealing. [13, 17] This study revealed that gender played a role in the decision to specialize, with twice as many females as males remaining undecided on specialization. This discrepancy is understandable, as female dentists are often balancing work and study commitments with the responsibility of raising children. On average, 71% of female dentists reported having children, adding additional considerations to their career decisions [18]. Childcare needs will shape the future work patterns of female dentists. [18] In the UK, more female dental students than male counterparts anticipate taking additional time out of their future careers to focus on childcare responsibilities. Additionally, ethnicity was not found to impact students' intentions to specialize, aligning with recent findings. No evidence was found linking parental occupation to the decision to specialize among respondents. This suggests that the dental students in the study were independent and mature individuals, making their own decisions rather than being influenced by their parents' work experience. The fact that all respondents who chose Paediatric Dentistry as their first career choice were female aligns with findings from other studies, indicating that Paediatric Dentistry is predominantly a female-dominated profession. [19] Previous studies [20,21] have noted a rise in the overall number of female UK dentists pursuing specialization, as well as gender disparities within specific specialties. With the increasing presence of females in the UK dental workforce, there may be implications for access to dental care and specialized services in the future. The decision of an individual student to pursue postgraduate qualifications is likely influenced



by their interactions with specialist clinical staff during their undergraduate studies, emphasizing the crucial role of academic teaching staff as role models.

References

1. V. Muirhead., D. Locker., 2007. Canadian dental students' perceptions of stress. *Journal-Canadian Dental Association*. 73 (4), 323.
2. C.T. Sreeramareddy., P.R. Shankar., V.S. Binu., C. Mukhopadhyay., B. Ray., R.G. Menezes., 2007. Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Medical education*. 7 (1), 1-8.
3. S. Acharya., 2003. Factors affecting stress among Indian dental students. *Journal of dental education*. 67 (10), 1140-1148.
4. A. Pau., M.L. Rowland., S. Naidoo., R. AbdulKadir., E. Makrynika., R. Moraru., R. Croucher., 2007. Emotional intelligence and perceived stress in dental undergraduates: a multinational survey. *Journal of dental education*. 71 (2), 197-204.
5. D. Henzi., E. Davis., R. Jasinevicius., W. Hendricson., 2007. In the students' own words: what are the strengths and weaknesses of the dental school curriculum?. *Journal of Dental Education*. 71 (5), 632-645.
6. L. Nonnemaker., 2000. Women physicians in academic medicine—new insights from cohort studies. *New England Journal of Medicine*. 342 (6), 399-405.
7. M.F. Myers., 2013. Doctors' marriages: A look at the problems and their solutions. *Springer Science & Business Media*.
8. J. Puryer., A. Patel., 2016. The career intentions, work-life balance and retirement plans of dental undergraduates at the University of Bristol. *British dental journal*. 220 (4), 183-186.
9. N.L. Fisher., R. Wilson., D. Bartlett., 2007. The perceived barriers of vocational dental practitioners in London to specialisation. *British dental journal*. 203 (Suppl 5), 25-27.
10. H. Karibe., A. Suzuki., T. Sekimoto., M.T. Srithavaj., A. Iamaroon., S. Warita., S. Nakahara., 2007. Cross-cultural comparison of the attitudes of dental students in three countries. *Journal of dental education*. 71 (11), 1457-1466.
11. H. Karibe., T. Kawakami., A. Suzuki., S. Warita., K. Ogata., K. Aoyagi., G. Dahllöf., 2009. Career choice and attitudes towards dental education amongst dental students in Japan and Sweden. *European Journal of Dental Education*. 13 (2), 80-86.
12. S. Saeed., M. Jimenez., H. Howell., N. Karimbux., C. Sukotjo., 2008. Which factors influence students' selection of advanced graduate programs? One institution's experience. *Journal of dental education*. 72 (6), 688-697.
13. M. Scarbecz., J.A. Ross., 2007. The relationship between gender and postgraduate aspirations among first-and fourth-year students at public dental schools: a longitudinal analysis. *Journal of dental education*. 71 (6), 797-809.
14. M. Dhima., V.C. Petropoulos., R.K. Han., T. Kinnunen., R.F. Wright., 2012. Dental students' perceptions of dental specialties and factors influencing specialty and career choices. *Journal of dental education*. 76 (5), 562-573.
15. R.G. Weaver., J.E. Chmar., N.K. Haden., R.W. Valachovic., 2005. Annual ADEA survey of dental school seniors: 2004 graduating class.
13. American Dental Association. 2010–2011. Survey of dental education. *Acad. Programs Enrol. Grad*. 2012. 6 1–78.
14. E.L. Linn., 1971. Women dentists: Career and family. *Social Problems*. 18 (3), 393-404.
15. J.E. Gallagher., R. Patel., N.H. Wilson., 2009. The emerging dental workforce: long-term career expectations and influences. A quantitative study of final year dental students' views on their long-term career from one London Dental School. *BMC Oral Health*. 9, 1-9.
16. L.G. Katrova., 2004. Gender impact on the socioprofessional identification of women dentists in Bulgaria. *Journal of Dental Education*. 68, 19-22.
17. M.L. Hunter., L.E. Harrhy., M.Z. Morgan., 2010. The United Kingdom's specialist workforce in paediatric dentistry: current and future trends. *British Dental Journal*. 208 (12), 559-562.
18. C.S. Drugan., I.G. Chestnutt., J.R. Boyles., 2004. The current working patterns and future career aspirations of specialist trainees in dentistry. *British dental journal*. 196 (12), 761-765.