






Burnout among Dental Students of Private and Public Dental Colleges in Pakistan - A Cross-Sectional Study

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ABSTRACT

Objective: To assess the prevalence of burnout among dental students of public and private institutions in Khyber Pakhtunkhwa and Punjab, Pakistan. **Material and Methods:** A cross-sectional descriptive survey was conducted at five public and private dental institutions from June 2021 to May 2022. A validated twelve-item closed-ended Burnout Clinical Subtype Questionnaire was distributed among the dental students of two private and two public institutes in Pakistan. The research questions focused on demographic information and students' academic experiences. Data analysis is presented through tables and descriptive methods. **Results:** A total of 274 dental undergraduate students - second (42.3%), third (35.4%), and final (22.3%) academic year participated in this study. The mean age of the respondents was 21.9, with the range of 20-26 years. Most participants were females (74.1%) compared to the males (25.9%). The findings for burnout syndrome among dentistry students and students in the private and public sectors were not significant. **Conclusion:** In the current study, burnout levels among dental undergraduates, both private and public, were low.

Keywords: Burnout, Professional; Dentistry; Stress, Psychological.

Introduction

Burnout is a condition resulting from chronic workplace stress that is not adequately managed. The term burnout was introduced in the 1970s by Maslach and Leiter and was defined as a syndrome with emotional exhaustion, depersonalization, and diminished personal accomplishment that can occur among individuals working with people [2]. A significant risk factor for the onset of burnout syndrome is ongoing stress at work [3]. When a person cannot manage stress efficiently, they may experience burnout, which can have detrimental effects on their mind and health, leading to serious health consequences [4].

Burnout among health professionals is characterized by different levels of enthusiastic depletion, depersonalization, and a low feeling of individual achievement [5]. Burnout syndrome is more common in health professionals, including doctors, dentists, nurses, pharmacists, etc., but it can be observed in any profession [6]. Burnout syndrome has been reported to be particularly common among students pursuing healthcare professions like dentistry, nursing, and medicine [7-9]. Research has indicated that dentists are more vulnerable to burnout syndrome because of the nature of their clinical and practical work [10-12]. Burnout syndrome in medical and dental schools has the potential to harmfully impact students' academic development and overall well-being, with burnout identified as a significant independent predictor of suicide ideation/tendencies and dropping out of medical school [13,14].

Academic performance is influenced by emotional, mental, and psychological wellness, which is a common fact. A stressful workplace impairs academic performance, increases student worry and trepidation, and ultimately leads to burnout. In addition, a change in social, environmental, cultural, and lack of familiarity also contribute to stress. Stress levels are increased by financial obligations, societal demands, expectations, and the dread of failing [15]. Burnout can be seen at every stage of the profession, which has a direct impact on the personal as well as professional life. It impacts students and practitioners with decades of experience [16]. It is most critical when dentists make their first step into professional life.

Over the last two decades, the number of public and private dental schools has increased in Pakistan [17]. A number of studies have been done across the world tackling this issue, but very little attention has been paid to depression among dental students in Pakistan.

Therefore, there is a dire need to incorporate stress management skills/ workshops/seminars/programs in different dental institutions within Pakistan [18]. Therefore, this study aimed to assess the prevalence of burnout among dental students of public and private institutions in Khyber Pakhtunkhwa and Punjab, Pakistan.

Material and Methods

Study Design and Sampling

This cross-sectional survey study was conducted by using a validated self-administered questionnaire from 01 June 2022 to 31 May 2022 among the dental students of four different dental institutes of Pakistan wherein the Ayub Medical and Dental College (Abbottabad) and Khyber College of Dentistry (Peshawar) are the public institutes. In contrast, Peshawar Dental College (Peshawar) and Foundation University College of Dentistry (Islamabad) are private institutes. The participants were recruited using a purposive sampling technique, and the target population was the second-, third-, and final-semester-year dental students.

Data Collection

The "Burnout Clinical Subtype Questionnaire Student Survey," or BCSQ-12-SS [19], is the study's suggested modification of the "Burnout Clinical Subtype Questionnaire" for probable applicability to students.

This adaption indicated the original design's factorial structure and good psychometric qualities. This offers support for applying the questionnaire and lists the possibility of quickly differentiating between students using clinical burnout categories.

A pre-validated BCSQ-12-SS19 was used for this study. The nineteen-item questionnaire was broadly categorized into two sections: Section I comprised of participant's background information such as age, gender, academic year, and place of residence and Section II of the questionnaire consisted of 12 significant statements about academic experiences in student life. Respondents were requested to choose among five options provided: "strongly disagree," "disagree," "undecided," "agree," or "strongly agree".

Initially, the Burnout Clinical Subtype Questionnaire [18] was pilot-tested on 30 randomly selected dental students in 1st academic year. First academic year students were chosen as they were freshly inducted and exposed to different parts of the syndrome. Consequently, further questionnaire modifications were done before the actual survey. The questionnaire was mailed to the dental undergraduate students of the second-, third- and final academic year.

Statistical Analysis

Descriptive statistics that included (mean with standard deviation) were calculated. As the data were not normally distributed, the Mann-Whitney U test was applied to compare students from public and private institutions. SPSS software version 20.0 (IBM Corp., Armonk, NY, USA) was used for statistical analysis, with a significance level of $p \leq 0.05$.

Ethical Clearance

Ethical approval was obtained from the Research Ethics Committee of the HBS Medical and Dental College, Pakistan (approval no. IRB/22/248).

Results

A total of 274 dental undergraduate students - second (42.3%), third (35.4%), and final (22.3%) academic year participated in this study. The mean age of the respondents was 21.9, with the range of 20-26 years. Most participants were females (74.1%) compared to the males (25.9%). Table 1 shows the demographic data of respondents.

Table 1. Characteristics of the studied participants.

Variables	N (%)
Age	
Range	20 - 26
Mean (SD)	21.9 ±1.59
Gender	
Male	71 (25.9%)
Female	203 (74.1)
Academic year	
Second	116 (42.3)
Third	97 (35.4)
Final	61 (22.3)

Regarding the student's academic experiences, a significant difference was noted for the statements "I give up when faced with any difficulty in my tasks as a student" ($p=0.013$) and "When the effort invested in studying is not

enough, I give up" ($p=0.028$). There was no difference regarding burnout syndrome among dental students from private and public institutes, as shown in Table 2.

Table 2. Responses about students' academic experiences.

Questionnaire	Institute	N	Mean	SD	p-value
1. I think I invest more than is healthy in my commitment to my studies	Public	127	2.62	1.15	0.386
	Private	147	2.49	1.12	
2. I would like to study something else that would be more challenging to my abilities	Public	127	3.09	1.30	0.234
	Private	147	3.02	1.38	
3. When the results of my studies are not good at all, I stop making an effort	Public	127	1.84	1.05	0.247
	Private	147	2.02	1.16	
4. I neglect my personal life due to pursuing great objectives in studying	Public	127	2.48	1.14	0.865
	Private	147	2.44	1.18	
5. I feel that my current studies are hampering the development of my abilities	Public	127	2.57	1.21	0.387
	Private	147	2.76	1.16	
6. I give up in response to an obstacle in my studies	Public	127	2.19	1.15	0.206
	Private	147	2.32	1.18	
7. I am endangering my health in pursuing good results in my studies	Public	127	2.45	1.22	0.111
	Private	147	2.64	1.31	
8. I would like to study something else in which I could better develop my talent	Public	127	2.80	1.33	0.763
	Private	147	2.81	1.38	
9. I give up when faced with any difficulty in my tasks as a student	Public	127	2.06	1.05	0.019*
	Private	146	2.30	1.19	
10. I ignore my own needs to satisfy the requirements of my studies	Public	127	2.73	1.23	0.402
	Private	147	2.55	1.22	
11. My studies do not provide me with opportunities to develop my abilities	Public	127	2.40	1.10	0.597
	Private	147	2.42	1.16	
12. When the effort invested in studying is not enough, I give up	Public	127	2.16	1.12	0.028*
	Private	147	2.26	1.27	

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree, and 5 = Strongly Agree; *Statistically significant.

Discussion

Emotional exhaustion was the most critical component affecting Sudanese dental students [20]. Burnout components similarly affected the students regarding gender (male and female) in 3rd and 4th year students. The selection of dentistry as the first career did not affect the burnout symptoms. Burnout occurs at a personal level, and its progression may take decades. It appears gradually and progresses almost unperceptively, and the affected individual is usually in denial [21].

A recent study found a statistically significant increase in stress mean scores in Karnataka Lingayat Education University dental students compared to Rajiv Gandhi University of Health Sciences [22]. Applying the strict rule of burnout syndrome, there is a statistically significant rise in burnout syndrome, with an odds ratio of 3.97 times, as found in Karnataka Lingayat Education University dental students. No difference in burnout and stress between males and females and the social classes was noted. This concluded that burnout and stress were significantly more prevalent among dental students at Karnataka Lingayat Education University than at Rajiv Gandhi University of Health Sciences [22].

This study shows that 2nd, 3rd, and final-year dental students participated, of which females were the majority compared to males. There was no difference regarding burnout syndrome among dental students from private and public institutes. These students addressed the following statements; 'I think I'm investing more than is healthy in my commitment to my studies,' 'I would like to study something else that would be more

challenging to my abilities,' 'When the result of my studies are not good at all, I stop making an effort,' 'I neglect my personal life due to pursuing great objectives in studying,' 'I feel that my current studies are hampering the development of my abilities,' 'I give up in response to an obstacle in my studies,' 'I am endangering my health in pursuing good results in my studies,' 'I would like to study something else in which I could better develop my talent,' 'I give up when faced with any difficulty in my tasks as a student,' 'I ignore my own needs to satisfy the requirements of my studies,' 'My studies do not provide me with opportunities to develop my abilities' and ' when the effort invested in studying is not enough, I give up.'

There is no significant difference among public and private dental colleges. The study contradicts other studies [22,23], and the reason for this is that the students are dependent on their parents mostly during their undergraduate education and might have good financial support. The burnout syndrome is strongly linked with excessive handling of the patients, which imparts specific negative effects on their personal and professional life and well-being. Students have to do a limited number of patients during their second-, third- and final years who are not overburdened as general dentists and can easily cope with their clinical stress as senior faculty members always supervise them. Students are not held solely responsible for the patient's clinical outcomes and procedures. Few studies reported that burnout syndrome is related to a lack of family support, education, and working environment, which may be due to night shifts and long working hours, and have advised that policymakers should amend the list of occupational diseases for the work-related stress risk assessment [24,25].

There are a few limitations associated with this study. Firstly, the sample size is small. Secondly, the causes and effects of dental students cannot be assessed through this study owing to the study design. Therefore, techniques like in-depth interviews or case studies are recommended for the future. However, the findings of this study might aid policymakers and other stakeholders in counseling students to reduce anxiety and stress via mentoring and other health promotion and awareness programs. Also, there are more suitable tools than the instrument used, the MBI HSS tool (for healthcare professionals) [1]. Furthermore, additional research could be carried out in other dental education phases in various dental colleges to ascertain whether these findings are generalizable.







The study's strength is that no such comparative cross-sectional study has yet been conducted among dental students in Pakistan. It might be an initial step toward further investigation. Additionally, because the study used dental student samples from two autonomous communities and four different institutions of private and public sectors, it became easier to generalize the results.

It is recommended that a similar study on a larger scale be conducted. It will be essential to examine larger populations of both public and private medical and dental institutions in Pakistan to identify the factors associated with emotional drainage and perceived tension/pressure.

Conclusion

No burnout was present in public and private dental college undergraduate dental students.

Authors' Contributions

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SA		https://orcid.org/0000-0002-3515-526X	Conceptualization, Formal Analysis, Resources, Data Curation and Supervision.
RI		https://orcid.org/0000-0002-0046-3529	Methodology, Formal Analysis, and Writing - Review and Editing.
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AI		https://orcid.org/0000-0002-4769-6653	Writing - Review and Editing.

All authors declare that they contributed to a critical review of intellectual content and approval of the final version to be published.

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None.

Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

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