The Perception of Stress among the Final Year Students in Prosthodontics

Maskey B[1], Shrestha K[2], Mathema SRB[3]

[1]Assistant Professor, Department of Prosthodontics and Maxillofacial Prosthetics, People's Dental College and Hospital, Kathmandu, Nepal

[2]Associate Professor, Department of Prosthodontics and Maxillofacial Prosthetics, People's Dental College and Hospital, Kathmandu, Nepal

[3]Professor, Department of Prosthodontics and Maxillofacial Prosthetics, People's Dental College and Hospital, Kathmandu, Nepal

Abstract

Introduction: Prosthodontics is a challenging discipline for dental students. This study aims to identify the sources of stress amongst final year undergraduate dental students in prosthodontics at People's Dental College and Hospital, Nepal. Identifying these potential sources of stress may provide faculties and administrators an opportunity to delineate areas of concern and approach student effectively.

Materials and methods: A modified version of the Dental Environment Stress (DES) questionnaire with 22 items was used to assess levels of stress.

Results: The major stressors included worry of not completing quotas with a mean score of 3.63 followed by examinations, shortage of allocated clinical and laboratory time, fear of failing a course or the year, overloaded feeling due to huge syllabus, late ending day, responsibility of getting suitable patients, fear of being unable to catch up if behind and patients being late or not showing for their appointments. Amongst these major stressors, the top two stressors were performance pressure related.

Conclusions: Although perceived stress in prosthodontics was relatively less than expected, certain areas were highly stressful for majority of the students. There is a need for adopting new strategies by the university, institute, faculties and students themselves for stress management.

Key words: prosthodontics, dental student stress, Nepal

Introduction

Prosthodontics, as a discipline is generally accepted as challenging and demanding, requiring high level of skill, preparation and planning for a dental student.[1,2] The subject occupies a major portion of the dental school curriculum and makes up for most of the clinical requirements in the curriculum.[3] As part of the training, a student posted in the department are required to learn and perform clinical procedures, laboratory exercises with precision within a stipulated timeframe. This necessitate student to stay beyond the regular hours of dental school with limited time for leisure, risking students to physical and psychological disturbances in a long run.[4-6] Furthermore, conforming to other clinical requirements and exams, including both internal and external exams is always a challenge and sometimes stressful.

Stress in dental schools has always been a topic of debate among dental educators. It has been strongly associated with the student's wellbeing, academic performance and their ability to cope with their future practice as dental professionals. Hence, considerable

Conflict of Interest: No

***Corresponding Author**

Dr. Brijesh Maskey
Assistant Professor
Department of Prosthodontics and Maxillofacial Prosthetics
People's Dental College and Hospital, Kathmandu , Nepal
Email: bridgesmaskey@yahoo.com

number of studies is dedicated in understanding the potential source of stress among the dental students throughout the globe and there is some degree of consensus concerning the stressful factors. The potential stressors identified by these studies can be broadly grouped into factors concerning dental student's self beliefs, patient management, rigorous clinical training, faculties and administration. However, these studies have failed to delineate the relation between these recognized factors and the subject concerned.

There has been an attempt made to explore the factors contributing to prosthodontic exam anxiety among undergraduate dental students recently.[7] Nonetheless, other factors contributing to stress in prosthodontics has never been explored considering the nature of the subject. Hence, this study aims to trace the perceived sources of stress amongst final year dental students in prosthodontics.

Materials and Methods

A cross-sectional study was conducted among final year (fourth year, phase 2) undergraduate dental students enrolled in People's Dental College and Hospital, affiliated to Tribhuvan University, Kathmandu, Nepal. No ethical approval was obtained since the participation in this study was voluntary, and all participants remained anonymous as in previous studies.[8-12]

Stress was measured using a modified dental environment stress (DES) questionnaire which consisted of 22 items, relevant to Nepalese dental students and education system. Further, these items were also grouped into six composite categories of related items. The response for each item was based on a four point Likert-type scale with response options of 1– not stressful, 2–slightly stressful, 3–moderately stressful and 4–severely stressful.

The questionnaires were distributed by the authors to the students at the end of their respective clinical posting in prosthodontics. Each batch of students was briefed about the purpose of this survey and assured of confidentiality. The total time allocated to complete the questionnaire was approximately 20 minutes. Only students who were present on the day of survey were included. No attempt was made to trace the students who remained absent on the survey days and they constituted the exclusion criterion.

Results

Demographic profile

A total of 69 students of the 75 from the final year phase 2, undergraduate students studying in People's Dental College and Hospital participated in this study. This yielded a response rate of 92%. Amongst the total, 53 (76.81%) respondents were females and the remaining 16 (23.19%) were males. Because of the small number of male respondents, the results were not reported separately for male and female. All the respondents were single. The demographic characteristics of study subjects are presented in Table 1.

Table 1: Sample distribution by gender and the response rate

Nos. of students	Male	Female	Response rate %
69	16	53	92

Perceived stressors based on items in prosthodontics

A mean DES score for each item was calculated and this served as the basis for ranking the items. Every question did not elicit a total response of 69 as every question was not answered by all the students. The mean score of 9 items were above 3, 12 items were above 2, 2 items above 1 and none below 1 indicating that the students were stressed to certain degree.

Two amongst the three items related to performance pressure i.e. "worry of not

completing quotas" (mean DES score=3.63) and "examinations" (mean DES score=3.42) was perceived as most stressful by the students. These items received the highest stress rating from 76.81% and 53.62% of the respondents, respectively. The third highest ranked item was related to faculty and administration i.e. "shortage of allocated clinical and laboratory time" (mean DES score=3.38) which received the highest stress rating possible from 59.42% of the respondents. Meanwhile, the students were minimally stressed with the following items: biasness in dental school (mean DES score=2.03) and inadequate number of instructors in relation to student (mean DES score=2.06) which received the least stress rating possible from 36.23% and 37.68% respectively. Stress scores for each item and the ranking are summarised in Table 2.

Table 2: Perceived sources of mean stress scores and the rankings

S.N.	Stress items	Mean DES stress score	Ranking
Self efficacy beliefs			
1.	Fear of being unable to catch up if behind	3.01	8*
2.	Fear of failing a course or the year	3.28	4
3.	Lack of confidence in the subject	2.64	12
4.	Insecurity concerning professional future in the subject	2.62	13
Faculty and administration			
5.	Inconsistency of feedback on work between different instructors	2.44	17
6.	Receiving criticism about work	2.51	16
7.	Being treated as immature & irresponsible by faculty	2.65	11
8.	Getting study material	2.13	20
9.	Inadequate number of instructors in relation to student	2.06	21
10.	Shortage of allocated clinical and laboratory time	3.38	3
11.	Biasness in dental school	2.03	22
Workload			
12.	Overloaded feeling due to huge syllabus	3.12	5
13.	Difficulty in learning syllabus	2.61	14
14.	Late ending day	3.1	6
Patient treatment			
15.	Patients being late or not showing for their appointments	3.01	8*
16.	Fear of dealing with patients who do not disclose the existence of a contagious disease	2.79	10
17.	Working on patients with dirty mouths	2.4	18
Clinical training			
18.	Responsibility of getting suitable patients	3.07	7
19.	Difficulty in learning clinical procedures	2.59	15
Performance pressure			
20.	Competition for grades among peers	2.36	19
21.	Worry of not completing quotas	3.63	1
22.	Examinations	3.42	2
Overall DES mean score		2.77	

*DES score of both these items were same

Table 3 Perceived sources based on six composite categories and the rankings

S.N.	Category	Stress score	Ranking
1.	Self efficacy beliefs	2.89	3
2.	Faculty and administration	2.46	6
3.	Workload	2.94	2
4.	Patient treatment	2.73	5
5.	Clinical training	2.83	4
6.	Performance pressure	3.14	1

Perceived stressors based on composite categories in prosthodontics

The mean stress score for each category was calculated by taking the average score of each item in the category. "Performance pressure" category was ranked the highest with a mean stress score of 3.14 which was the only category recorded as severely stressful. Categories recording moderate mean stress scores were "workload," "self efficacy beliefs," "clinical training," "patient treatment" and "faculty and administration." Stress scores for six composite categories are summarized in Table 3.

Discussion

The mean DES score reported across all items with regards to prosthodontics was 2.77 which indicate that these students were moderately stressed. However, for approximately forty percent of the items, the students were severely stressed.

Majority of the students in prosthodontics i.e. 76.81% were severely stressed about not completing quota. Completing quota is related to multiple factors, particularly number and character of designated work, availability of the patients and time allotted for completion of the work. Considering the fact that a final year student has already learnt and performed the clinical procedure in previous semester and the allotted number is minimal i.e. only one complete and one partial denture to deliver in a month, it is highly unlikely that the number and character of quota may be an issue. However, moral obligations concerning patient like finding suitable patients and managing their appointments in addition to the allotted time to complete the quota may be a concern. The three hours dedicated for practical postings may be sufficient for discussion and clinical work but laboratory work may necessitate the students to stay beyond the institutional hours. Hence, a late ending day may be a norm when posted at prosthodontics department.[13] Interestingly, these factors (items 10, 14, 15 and 18) have all been rated as severely stressful by the students (rank 3, 6, 8 and 7 respectively).

The second major stressor identified in this study was examination which is in accordance with the previous findings.[14] Students were also severely stressed about the huge syllabus of prosthodontics. Taking into account the diverse nature of the material an undergraduate student has to master in prosthodontics, it is not surprising that the students consider themselves overloaded. In addition, the students appeared to be fearful about failing a course and likewise losing a year and being unable to catch up if behind.

The student assigned least DES score for biasness which was closely followed by the number of instructors in relation to students. As anticipated, the students appeared only slightly stressed about the number of instructors as the prosthodontic faculty/student ratio here at People's Dental College and Hospital is 1:7 which is higher than the requirement put forward by the regulatory body in Nepal.

Although DES questionnaire is frequently used to monitor dental student stress worldwide, the scores may not be sufficiently sensitive measure of stress and there is a strong need to validate the DES score against alternate instruments with well-established psychometric properties.[15] In addition, the prosthodontic DES score here represents only a single institute in the capital which may not be representative for other universities, institute and location. Hence, the result should be considered with caution.

Conclusion

Within the limitations of the study, it appears that the final year, phase 2 undergraduate students at People's Dental College and Hospital perceive prosthodontics less stressful than expected; however, certain areas are severely stressful to a large number of students and are a cause for concern. Taking this into account, it appears that there is a need for the establishment of student counselling service which can assist undergraduates with mental health issues and time management skills. Alternatively, provision for increased social activities can be incorporated in the system. Regular review of the curriculum with special focus on recent trends in prosthodontics and not necessarily to reduce stress should be done. Institutes have and should continue to make arrangements for faculties to interact with the educational specialists to learn and practice recent educational methodologies to maximise student performance.

Acknowledgement

The authors would like to thank all the interns for their assistance in collecting data. A special thanks to all the final year students of People's Dental College and Hospital, Kathmandu, Nepal who participated and contributed to this study.

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