Research Article

PERCEIVED SOURCES OF STRESS AMONG DENTAL STUDENTS IN CHENNAI

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Abstract:

The goals of this study were to identify sources of stress in dental education and to explore the role of year of study and gender on perceived stressors. Two hundred and sixty nine undergraduates, officially registered at the SRM University, college of Dentistry, participated in the survey by completing a twenty five-item modified version of the Dental Environment Stress Questionnaire. Assigned workload, performance pressure, and self-efficacy beliefs constituted the most stress-provoking factors. Gender differences were found in most of the perceived stressors, whereas stress intensity greatly differed by year of study. Multivariate analysis suggested that, irrespective of gender, fourth-year and graduating students were less concerned about class work overload, clinical training difficulties, and course failing, but were significantly more insecure about their professional future. Entry-level students appeared to be the most concerned about the lack of time for relaxation. However, they were the least stressed about completing graduation requirements compared with the rest of their peers. Possible strategies for reducing stress in

Key words: dental student, stress, education, gender, year of study

Introduction

STRESS – The dictionary meaning of stress is anxiety, difficulty, distress, hardship, pressure, strain, tenseness, tension trauma, worry off may also mean burden, distress, over stretch, pressure, pressurize, push of the limit, tax, weight down.

Factors inducting stress among dental students

The factors are Assigned workload, Performance pressure, Self efficacy belief, Patient treatment, Clinical Training, Stress regarding the professional caries, Management of personal life, Examination stress, Stress during the time of results1. The goal of this study is to identify sources of stress in dental education and to explore the role of year of study and gender on perceived stress provoking factors. Gender differences were found in most of the perceived stress whereas stress intensity greatly differed by year of study1. Dental colleges are found to be highly demanding and stressful learning environments2. The unique pedagogical procedure differs greatly from anything they have experienced in their under graduate training.

Additionally during the period of clinical training students are exposed to more stress analogues to those of dental practitioners. It has been found that dental students express considerable stress symptoms during their training period and that they are more anxious than the general population showing higher levels of depression, obsessive – compulsive disorders and inter personal sensitivity than age – matched norm studies of dental school life, occupational pressures, health issues, alcohol use and mortality suggest that both dental education and practice contain stress provoking elements that generally have re effects on individual well being.
METHODOLOGY:

The study sample was derived from the dental students of SRM dental college, Ramapuram, Chennai. The total number of students who participated was 269 out of which 54 were males and 215 were females. The age groups of students who participated were between 18 years to 24 years. The whole student body participated in the study. The purpose of the study was communicated well in advance to the students and student participation in the research was voluntary. The questionnaire used in this research was based on the dental environment stress (DES) .DES questionnaire was modified to make it applicable to the Indian students. The modified version contained 25 stress related items. Students were asked to assess the questionnaire items as not stressful, slightly stressful, moderately stressful, and severely stressful. In the multiplicative models, study level and gender were always included as possible predictors in order to simultaneously access the effect of the above factors on student’s responses. On a four-point Likert scale. Univariate statistical analysis was conducted using SPSS statistical package.

RESULTS

There was 100% response rate from the students and therefore all the 269 participated in the study. The thirty stress provoking factors were grouped into seven categories:

1. “Self-efficacy beliefs,”
2. “Faculty and administration,”
3. “Workload,”
4. “Patient treatment,”
5. “Clinical training,”
6. “Performance pressure,” and
7. “Other”

Table 1: QUESTIONNAIRE ON SELF EFFIENCY BELIEF.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>SELF-EFFICIENCY BELIEF</td>
<td>269</td>
<td>4.5</td>
<td>22.7</td>
<td>46.5</td>
<td>26.4</td>
<td>(.726)</td>
<td>(.003)</td>
</tr>
<tr>
<td>I A</td>
<td>Completing Graduation Requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I B</td>
<td>Fear of failing course or year</td>
<td>269</td>
<td>7.8</td>
<td>16.7</td>
<td>20.4</td>
<td>55.0</td>
<td>(.144)</td>
<td>(.001)</td>
</tr>
</tbody>
</table>

*: p<0.05,  ** : p<0.01

I A
- 46.5% of students are moderately stressed about completing their graduation.
- 4.5% of students are not stressed about completing their graduation.

I B
- 55% of students are severely stressed about failing the course or year.
- 7.8% of students are not stressed about failing the course or year.
Table 2: QUESTIONNAIRE ON FACULTY AND ADMINISTRATION

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>FACULTY AND ADMINISTRATION</td>
<td>269</td>
<td>14.5</td>
<td>42.4</td>
<td>32.3</td>
<td>10.8</td>
<td>(.194)</td>
<td>(.000)</td>
</tr>
<tr>
<td>II A</td>
<td>Delay of receiving textbooks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II B</td>
<td>Lack of adequate clinical staff in clinics</td>
<td>269</td>
<td>14.8</td>
<td>38.7</td>
<td>29.4</td>
<td>17.1</td>
<td>(.355)</td>
<td>(.096)</td>
</tr>
<tr>
<td>II C</td>
<td>Atmosphere created by clinical faculty</td>
<td>269</td>
<td>14.9</td>
<td>33.9</td>
<td>29.7</td>
<td>21.2</td>
<td>(.862)</td>
<td>(.000)</td>
</tr>
<tr>
<td>II D</td>
<td>Rules and regulations of college</td>
<td>296</td>
<td>14.9</td>
<td>28.6</td>
<td>29.7</td>
<td>26.8</td>
<td>(.444)</td>
<td>(.012)</td>
</tr>
<tr>
<td>II E</td>
<td>Decision making process of college</td>
<td>269</td>
<td>14.1</td>
<td>30.1</td>
<td>30.9</td>
<td>24.9</td>
<td>(.478)</td>
<td>(.000)</td>
</tr>
</tbody>
</table>

*: p<0.05, **: p<0.01

II A 42.4% of students are slightly stressed about the delay of receiving textbooks. 10.8% of students are severely stressed about the delay of receiving textbooks.

II B 38.7% of students are slightly stressed about the lack of adequate clinical staff in clinics. 14.8% of students are not stressed about the lack of adequate clinical staff in clinics.

II C 29.7% of students are slightly stressed about the atmosphere created by clinical faculty.

II D 33.9% of students are moderately stressed about the rules and regulations of college.

II E 30.9% of students are moderately stressed about the decision making process of the college.

14.9% of students are not stressed about the atmosphere created by clinical faculty.

14.9% of students are not stressed about the decision making process of the college.

Table 3: QUESTIONNAIRE ON WORK LOAD

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>WORK LOAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III A</td>
<td>Amount of assigned classwork</td>
<td>269</td>
<td>9.0</td>
<td>26.8</td>
<td>43.5</td>
<td>20.8</td>
<td>(.763)</td>
<td>(.000)</td>
</tr>
</tbody>
</table>

**: p<0.001
III B  Lack of time for relaxation  
269  7.1  24.9  28.3  39.8  (.243)  (.009)  
III C  Lack of time to do assigned work  
269  10.0  24.2  34.9  30.9  (.491)  (.065)  
III D  Management of seminars and laboratories  
296  13.4  36.1  32.7  17.8  (.949)  (.113)  
III E  Success in medical subjects due to lack of time  
269  6.3  30.5  36.8  26.4  (.624)  (.221)  

*: p<0.05,  **: p<0.01  

III A  
- 43.5% of students are moderately stressed about the amount of assigned classwork.  
- 9.0% of students are not stressed about the amount of assigned classwork.  

III B  
- 39.8% of students are severely stressed about the lack of time for relaxation.  
- 7.1% of students are not stressed about the lack of time for relaxation.  

III C  
- 34.9% of students are moderately stressed about the lack of time to do assigned work.  
- 10.0% of students are not stressed about the lack of time to do assigned work.  

III D  
- 36.1% of students are slightly stressed about the management of seminars and laboratories.  
- 13.4% of students are not stressed about the management of seminars and laboratories.  

III E  
- 36.8% of students are moderately stressed about the success in medical subjects due to lack of time.  
- 6.3% of students are not stressed about the success in medical subjects due to lack of time.  

Table 4: QUESTIONNAIRE ON PATIENTS TREATMENT  

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stressed Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>PATIENTS TREATMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| IV A  | Fear of dealing with patients who do not disclose the existence of a contagious disease.  
269  9.6  39.8  32.0  18.6  (.066)  (.020)*  
IV A  | Patients being late or not showing up for appointment  
269  17.4  34.9  31.2  16.4  (.080)  (.003)**  
IV C  | Lack of communication or co-operation with patients  
269  13.7  28.6  30.9  26.8  (.281)  (.094)
• 39.8% of students are slightly stressed about the fear of dealing with patients who do not disclose the existence of a contagious disease.
• 9.6% of students are not stressed about the fear of dealing with patients who do not disclose the existence of a contagious disease.

IV B
• 34.9% of students are slightly stressed about the patients being late or not showing up for appointment.

Table 5: QUESTIONNAIRE ON CLINICAL TRAINING

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>CLINICAL TRAINING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VA</td>
<td>Difficulty in learning precision manual chills required in pre clinical lab work</td>
<td>269</td>
<td>16.7</td>
<td>43.5</td>
<td>30.5</td>
<td>9.3</td>
<td>(.028)*</td>
<td>(.494)</td>
</tr>
<tr>
<td>VB</td>
<td>Difficulty in learning clinical procedures and protocol</td>
<td>269</td>
<td>14.9</td>
<td>42.0</td>
<td>33.1</td>
<td>10.0</td>
<td>(.037)*</td>
<td>(.087)</td>
</tr>
</tbody>
</table>

*: p<0.05,  ** : p<0.01

IV A
• 16.4% of students are severely stressed about the patients being late or not showing up for appointment.

IV C
• 30.9% of students are moderately stressed about the lack of communication or co-operation with patients.
• 13.7% of students are not stressed about the lack of communication or co-operation with patients.

V A
• 43.5% of students are slightly stressed about the difficulty in learning precision manual chills required in pre clinical lab work.
• 9.3% of students are severely stressed about the difficulty in learning precision manual chills required in pre clinical lab work.

V B
• 33.1% of students are moderately stressed about the difficulty in learning clinical procedures and protocol.
• 10.0% of students are severely stressed about the difficulty in learning clinical procedures and protocol.
Table 6: **QUESTIONNAIRE ON PERFORMANCE PRESSURE**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slightly Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI</td>
<td>CLINICAL TRAINING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI A</td>
<td>Performance pressure examination and grades</td>
<td>269</td>
<td>5.6</td>
<td>16.7</td>
<td>27.5</td>
<td>50.2</td>
<td>(.149)</td>
<td>(.465)</td>
</tr>
<tr>
<td>VI B</td>
<td>Time of your results</td>
<td>269</td>
<td>5.9</td>
<td>12.6</td>
<td>24.5</td>
<td>56.9</td>
<td>(.204)</td>
<td>(.056)</td>
</tr>
</tbody>
</table>

*: p<0.05,  **: p<0.01

VI A
- 50.2% of students is severely stressed about the performance pressure examination and grades.
- 5.6% of students are not stressed about the performance pressure examination and grades.

VI B
- 56.9% of students are severely stressed about the time of your results.
- 5.9% of students are not stressed about the time of your results.

Table 7: **QUESTIONNAIRE ON OTHERS**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Question</th>
<th>Total No. of Students</th>
<th>Not Stress Full</th>
<th>Slight Stress Full</th>
<th>Moderately Stress Full</th>
<th>Severely Stress Full</th>
<th>Gender +</th>
<th>Year ++</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII</td>
<td>OTHERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII A</td>
<td>Insecurity concerning professional future</td>
<td>269</td>
<td>17.5</td>
<td>31.2</td>
<td>33.8</td>
<td>17.5</td>
<td>(.029)*</td>
<td>(.001)**</td>
</tr>
<tr>
<td>VII B</td>
<td>Neglect for personal life</td>
<td>269</td>
<td>24.5</td>
<td>34.9</td>
<td>24.2</td>
<td>16.4</td>
<td>(.201)</td>
<td>(.035)</td>
</tr>
<tr>
<td>VII C</td>
<td>Lack of self assessment and awareness</td>
<td>269</td>
<td>15.6</td>
<td>37.9</td>
<td>36.8</td>
<td>9.7</td>
<td>(.213)</td>
<td>(.888)</td>
</tr>
<tr>
<td>VII D</td>
<td>Financial responsibilities</td>
<td>269</td>
<td>17.1</td>
<td>29.4</td>
<td>32.0</td>
<td>21.6</td>
<td>(.763)</td>
<td>(.991)</td>
</tr>
<tr>
<td>VII E</td>
<td>Co-operation with dental technician</td>
<td>269</td>
<td>10.8</td>
<td>36.8</td>
<td>32.7</td>
<td>19.7</td>
<td>(.107)</td>
<td>(.531)</td>
</tr>
<tr>
<td>VII F</td>
<td>Lack of home atmosphere in the</td>
<td>269</td>
<td>26.4</td>
<td>22.3</td>
<td>15.2</td>
<td>36.1</td>
<td>(.103)</td>
<td>(.179)</td>
</tr>
</tbody>
</table>
VII A
- 33.8% of students are moderately stressed about the insecurity concerning professional future.
- 17.5% of students are not stressed about the insecurity concerning professional future.
- 17.5% of students are severely stressed about the insecurity concerning professional future.

VII B
- 34.9% of students are slightly stressed about the neglect for personal life.
- 16.4% of students are severely stressed about the neglect for personal life.

VII C
- 37.9% of students are slightly stressed about the lack of self assessment and awareness.
- 9.7% of students are severely stressed about the lack of self assessment and awareness.

VII D
- 32.0% of students are moderately stressed about the financial responsibilities.
- 17.1% of students are not stressed about the financial responsibilities.

VII E
- 36.8% of students are slightly stressed about the co-operation with dental technician.
- 10.8% of students are slightly stressed about the co-operation with dental technician.

VII F
- 36.1% of students are severely stressed about the lack of home atmosphere in the hostel.
- 15.2% of students are moderately stressed about the lack of home atmosphere in the hostel.

**Discussion**

This investigation is one of its first kinds to explore stress provoking factors among dental school students in Chennai. Indian formal education is provided through government colleges and private universities, and the course encompassing a five-year study program. First and second years are spent on medical courses; dental courses are primarily given in the third year and clinical work in the fourth and fifth year. The schools follow a traditional lecture-based system using projectors and live demonstrations. The results of this study support the existing evidence in the literature, indicating that dental students are subject to numerous work-related and academic stressors that may adversely affect their physical and psychological health. The primary sources of stress in the Indian dental school are fear of failing the course of the year, atmosphere created by the faculty (33.9%), delay of receiving the text books (42.4%), amount of assigned work load (43.5%), lack of time for relaxation (39.8%), fear of dealing with patients who do not disclose the existence of contagious disease (39.8%), patients being late or not showing up for appointment (34.0%), difficulty in learning precision manual skills required in preclinical lab work (43.5%), difficulty in learning clinical procedures (42%), time of results (56.9%) and also for the lack of home atmosphere in the hostel (36.1%).

The cross-sectional nature of the study and the sociocultural background of the Indian student population may limit the applicability of the conclusions to other institutions. In this investigation, the observed differences by year of study indicate that entering and preclinical students
are mostly concerned with factors closely related to workload, as well as examinations and grades, whereas clinical year students were more stressed about patient treatment and insecurity concerning their professional future.

Further, students in the third year of studies were the most affected by the acquisition of manual skills in laboratory and preclinical work and demonstrated a significant concern when considering the treatment of uncooperative patients. Moreover, first- and final-year students were the most concerned about “lack of time for relaxation,” a finding that may be attributed to the introduction to dental studies and the initiation of clinical training, respectively. The results show that on whole male students were more stressed about the course and its completion on time. These results could match most of the results in the studies conducted among the students in other countries. Thus it can be bought to lime light that the medical student and especially the dental students were more worried about the future. This could be pointed out to the increasing number of the pass outs every year and their fear of the competitive practice an taking up their post graduation course on time .thus the study clearly shows the urgent need of a counselor for the students who must be someone other than the dental faculty, to whom the students can freely talk about their insecurities and be a n overall more confident professional. Thus the course must include a holistic concept of a career build up, rather than only focusing on their intellectual training.

REFERENCES: