

ORIGINAL ARTICLE

Perception of Stress and Professional Burnout among Dental students during clinical years

ASADULLAH¹, AMNA NAUMAN KHAN², ANEELA AMJAD³, NAUMAN RAUF KHAN⁴, NIGHAT ZAHID⁵, NASRULLAH KHAN⁶¹General Dentist, Lahore²Professor and HOD Department of Community and Preventive Dentistry, Sharif Medical and Dental College, Lahore³Associate Professor Department of Oral Medicine and Diagnosis, Lahore Medical and Dental College, Lahore⁴Professor, Principal and HOD Department of Oral Pathology, Sharif Medical and Dental College, Lahore⁵Associate Professor, Department of Oral and Maxillofacial Surgery, Lahore Medical and Dental College, Lahore⁶Assistant Professor, Department of Oral Medicine and Diagnosis, Fatima Memorial Hospital, LahoreCorrespondence to Dr. Aneela Amjad, Email: aneela.amjad@imdc.edu.pk Contact no: 03004234903

ABSTRACT

Background: Dentistry is associated with numerous stressors and dental students encounter a lot of stress during their undergraduate studies. This study was conducted with the objectives to know the understanding of stress and factors among the clinical dental students.

Aim: To determine the perception of stress and professional burnout and determine the possible factors of it among dental students at College of Dentistry Sharif Medical and Dental College Lahore.

Methodology: A cross sectional study was carried out in May 2021 on 3rd and final year BDS students from Sharif Medical and Dental College Lahore by using modified dental environmental stress questionnaire. SPSS vn 23.0 was used.

Results: Male students are mostly affected by rules and regulations (36%) and lack of time to do schoolwork (36%) whereas female students are mostly affected by fear of failing exam (65%) whereas female students are mostly affected by fear of failing exam (65%). Whereas a highly significant association is seen between fear of failing exam and gender i.e., $p < 0.0001$ for the major cause of causing stress.

Conclusion: The result of this study shows that dental students of clinical years do suffer from stress. Syllabus and examination pattern should be amended to decrease stress as well as faculty attitude should be more supportive. Counselling sessions should be arranged for student's better performance.

Keywords: Stress, Burnout, Clinical dental students.

INTRODUCTION

The sense of being overwhelmed or unable to cope with mental or emotional pressure is known as **stress**. While a certain amount of stress is healthy and functions as a motivator for better performance, long-term stress can be debilitating¹. External physical or mental elements that influence an individual's health and psychological well-being cause stress^{2,3,4}. At various ages, stress is a major influence in decreasing one's effectiveness. Stress levels beyond a certain threshold were linked to depression, while low and moderate stress levels were linked to anxiety⁵. It can lead to physical exhaustion and worsening of one's health. Stress is caused by the dread of not being able to cope with people, our dreams, or our expectations. It is now popular among people of all professions. Dental students experience a lot of stress, and it's no secret that dentistry is a demanding career⁶. Dental education has been observed to cause significant anxiety among dental students, who are more stressed than the general public^{7,9}.

Stress may be introduced at the dentistry school level because of various rules and regulations of administrative system. The pressure to pass exams or advance professionally may also contribute to stress induction⁸. Stress appears to be causing a significant decrease in dentistry students' efficiency¹⁰. It is more common in clinical years among students. Different students came from diverse backgrounds and want to meet their expectations which cause tension among them.

Students' memory¹¹ and learning efficiency are also affected by stress.¹² Both dental school and clinical training can be stressful and have a negative impact on an individual's mental health^{3,4}. AL-Dharab A identified the development of stress because of too many assignments, competition with other students, fear of failure, poor relationships with other students or teachers, family problems, frequent examinations, examination phobia, demanding curriculum, anxious patients, complicated treatments and possible patient conflicts, and limited time to perform and finish the planned treatment¹⁰.

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Burnout can occur when dentistry students or practitioners are subjected to continuous stress. Burnout is a metaphor for exhaustion, analogous to putting out a fire or putting out a candle¹³. Burnout syndrome is a condition in which some individuals feel unhappy, unmotivated for their work, emotionally empty, and disheartened after a period¹⁴. Depression, low quality of life, loss of academic accomplishment, abandonment of education and job aspirations, and suicide ideation are all psychological effects of burnout among students^{15,17}.

The purpose of this study is to find the perception and associated factors of stress among dental students in their clinical years, so that counselling sessions or stress reduction therapies can be established for them. That is why this research was conducted at College of Dentistry, Sharif Medical and Dental College, Lahore.

MATERIAL AND METHODS

After ethical approval was sought from SMRC (Sharif Medical Research Centre) questionnaire-based cross-sectional survey was conducted on 200 dental students of clinical years (third and final year) from different Dental Colleges of Lahore. Students that were willing to respond were included in this study for one month. Student on antipsychotic drugs or having known clinical depression and students that did not fill complete questionnaire were excluded from the study.

The questionnaire was distributed to the students, and they were asked to submit the complete questionnaire on the same day. Modified dental environment stress (DES) questionnaire¹⁰ was used. The original DES consists of 34 close-ended questions in the English language that was applicable to dental students. But last 5 questions were related to marital factors that affect stress level of students, as in our culture marriage during graduation is rare so eliminated those questions, now the questionnaire has 29 questions. Questionnaire was validated and Cronbach alpha value was 0.782. The first two options not pertinent and not stressful was

labeled as **no stress (1)**, third option (slightly stressful) and fourth option (moderately stressful) was labeled as **mild to moderate stress (2)** and the fifth option (very stressful) was labeled as **severe stress (3)**¹⁰. The SPSS version 23.0 was used for data entry and analysis. Different variable of stress, gender and academic year and Chi-square test was used to analyze and correlate the variables. p value less than 0.05 was considered as statistically significant.

RESULTS

A total of 205 students responded but 5 questionnaires were not complete, so they were eliminated. Among 200 students, 59(29.5%) were males and 141(70.5%) were females with average age of 22.5±0.05 years. There was a predominant response from females of 3rd year (40%) followed by males of final year (16%) in

which 108 students (54%) from third year and 92 students (46%) were from final year. Table 1 shows distribution of stress among students and factors that were responsible for severe stress in descending order. Where by fear of failure was seen to be the most common factor of severe stress and cheating the least affecting severe stress factor.

A bar chart is marking multiple factors and its variation among females and males as given in graph 1. Male students are mostly affected by rules and regulations (36%) and lack of time to do schoolwork (36%) while female students are mostly affected by fear of failing exam (65%). There was a significant association seen in gender and year of study with multiple factors as can be seen in table 2 and 3. Whereas a highly significant association is seen between fear of failing exam and gender i.e., < 0.0001 for the major cause of causing stress.

Table 1: Distribution of stress among students and factors

Factors	No stress	Mild to moderate stress	Severe stress
Fear of failing course exam	13(6.5%)	77(38.5%)	110(55%)
Examination and grading	24(12%)	92(46%)	84(42%)
Fear of being unable to keep up with workload	19(9.5%)	96(48%)	85(42.5%)
Rules and regulation	37(18.5%)	81(40.5%)	82(41%)
Completion of graduation requirement	25(12.5%)	104(52%)	71(35.5%)
Attitude of faculty towards students	26(13%)	107(53.5%)	64(33.5%)
Receiving criticism about work	34(17%)	102(51%)	64(32%)
Insecurity about future	18(9%)	120(60%)	62(31%)
Lack of confidence to be successful student	36(18%)	101(50.5%)	63(31.5%)
Lack of time to do schoolwork	27(13.5%)	110(55%)	63(31.5%)
Patient not available at time	32(16%)	107(53.5%)	61(30.5%)
Difficulty in learning clinical procedure	30(15%)	109(54.5%)	61(30.5%)
Lack of time to relax	37(18.5%)	103(51.5%)	60(30%)
Difficulty in learning manual skills	24(12%)	117(58.5%)	59(29.5%)
Expectation vs reality	23(11.5%)	119(59.5%)	58(29%)
Lack of home atmosphere	55(27.5%)	88(44%)	57(28.5%)
Working of patient with poor oral hygiene	33(16.5%)	113(56.5%)	54(27%)
Lack of confidence in career decision	39(19.5%)	108(54%)	53(26.5%)
Inconsistency of feedback on your work	48(24%)	99(49.5%)	53(26.5%)
Learning environment by faculty	35(17.5%)	114(57%)	51(25.5%)
Difficulty of Course Work	25(12.5%)	133(66.5%)	42(21%)
Health	45(22.5%)	114(57%)	41(20.5%)
Discrimination	90(45%)	71(35.5%)	39(19.5%)
Amount of assigned work	36(18%)	131(65.5%)	33(16.5%)
Relation with classmates	97(48.5%)	69(34.5%)	34(17%)
Responsibility for Comprehensive Patient Care	37(18.5%)	131(65.5%)	32(16%)
Competition with classmates	69(34.5%)	100(50%)	31(15.5%)
Patient Inability to Complete Prescribed Care Plan	39(19.5%)	131(65.5%)	30(15%)
Cheating	90(45%)	90(45%)	20(10%)

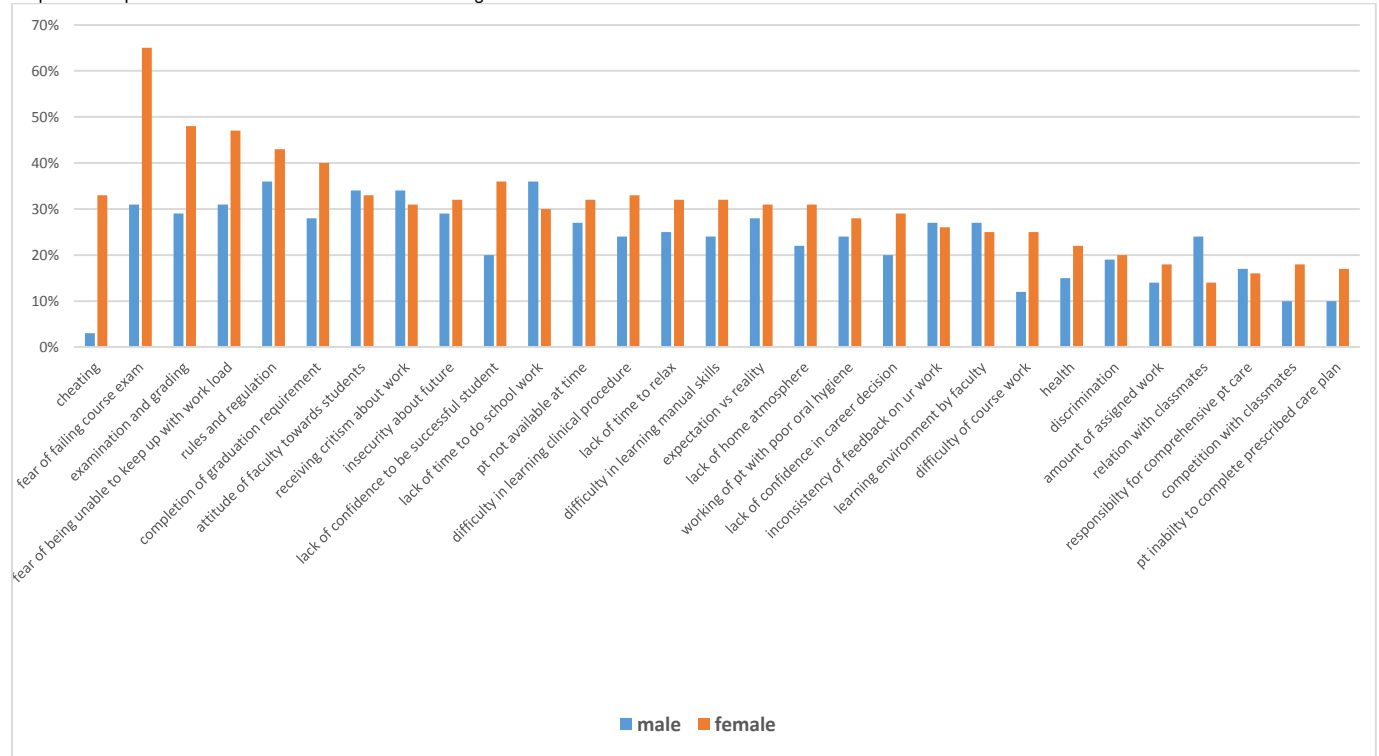
Table 2 Relation of stress with gender

Questionnaire	No stress		Mild to moderate stress		Severe stress		p-value
	M	F	M	F	M	F	
Fear of failing exam	10	3	31	46	18	92	0.0001
Fear of being unable to cope up with workload	8	11	33	63	18	67	0.068
Amount of assigned work	18	18	33	98	8	25	0.012
Difficulty of course work	12	13	40	93	7	35	0.024
Examination and grades	11	13	31	61	17	67	0.026
Completion of graduation requirement	11	14	34	70	14	57	0.043
Lack of time to do schoolwork	7	20	31	79	21	42	0.704
Patient inability to complete prescribed care plan	11	28	42	89	6	24	0.418
Responsibilities for comprehensive patient care	13	24	36	95	10	22	0.648
Patient not available at prescribed time	11	21	32	75	16	45	0.709
Difficulty in learning clinical procedure	12	18	33	76	14	47	0.237
Difficulty in learning manual skills	12	12	33	84	14	45	0.053
Working on patient with poor oral hygiene	12	21	33	80	14	40	0.582
Learning environment created by faculty	12	23	31	83	16	35	0.683
Receiving criticism about work	13	21	26	76	20	44	0.345
Rules and regulations	11	26	27	54	21	61	0.557
Attitude of faculty towards students	11	15	28	79	20	47	0.269
Inconsistency of feedback on your work	15	33	28	71	16	37	0.926
Relation with other classmates	25	72	20	49	14	20	0.236
Lack of time for relaxation	10	27	34	69	15	45	0.521
Lack of home atmosphere	9	46	37	51	13	44	0.002
Health	10	35	39	75	9	31	0.127
Lack of confident to be successful student	12	24	35	66	12	51	0.088
Expectation vs reality	5	18	40	79	14	44	0.296
Insecurity about your future	4	14	38	82	17	45	0.651
Lack of confidence in career decision	14	25	33	75	12	41	0.636
Competition with classmates	19	50	34	66	6	25	0.268
Cheating	26	64	31	59	2	18	0.094
Discrimination	21	69	27	44	11	28	0.125

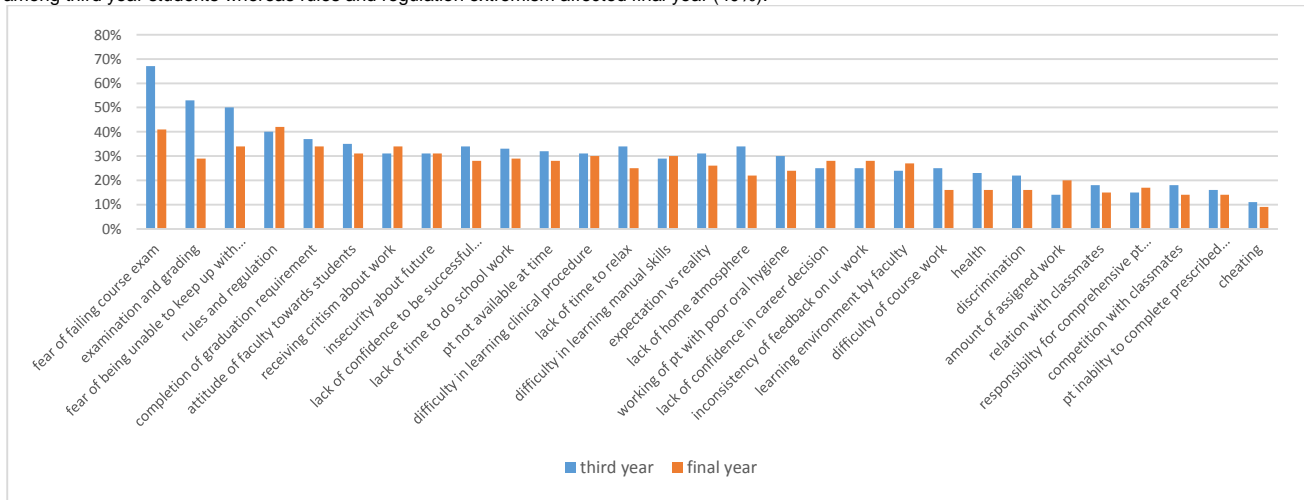
Table 3: Relation of stress with year of study

Questionnaire	No stress		Mild to moderate stress		Severe stress		p-value
	Third year	Final year	Third year	Final year	Third year	Final year	
Fear of failing exam	4	9	32	45	72	38	0.001
Fear of being unable to cope up with workload	4	15	50	46	54	31	0.003
Amount of assigned work	11	25	82	49	15	18	0.02
Difficulty of course work	8	17	73	60	27	15	0.035
Examination and grades	9	15	42	50	57	27	0.03
Completion of graduation requirement	13	12	55	49	40	31	0.883
Lack of time to do schoolwork	8	19	64	46	36	27	0.024
Patient inability to complete prescribed care plan	21	18	70	61	17	13	0.950
Responsibilities for comprehensive patient care	23	14	69	62	16	16	0.524
Patient not available at prescribed time	19	13	54	53	35	26	0.552
Difficulty in learning clinical procedure	19	11	56	53	33	28	0.508
Difficulty in learning manual skills	12	12	65	52	31	28	0.853
Working on patient with poor oral hygiene	10	23	66	47	32	22	0.11
Learning environment created by faculty	20	15	62	52	26	25	0.847
Receiving criticism about work	16	18	59	43	33	31	0.492
Rules and regulations	16	21	49	32	43	39	0.204
Attitude of faculty towards students	11	15	59	48	38	29	0.430
Inconsistency of feedback on your work	24	24	57	42	27	26	0.601
Relation with other classmates	51	46	37	32	20	14	0.818
Lack of time for relaxation	12	25	59	44	37	23	0.012
Lack of home atmosphere	26	29	45	43	37	20	0.134
Health	18	27	64	50	25	15	0.123
Lack of confident to be successful student	17	19	54	47	37	26	0.537
Expectation vs reality	8	15	66	53	34	24	0.134
Insecurity about your future	5	13	70	50	33	29	0.052
Lack of confidence in career decision	22	17	59	49	27	26	0.857
Competition with classmates	32	37	58	42	18	13	0.292
Cheating	51	39	45	45	12	8	0.569
Discrimination	49	41	35	36	24	15	0.465

Graph 1: Comparison of several factors of stress affecting males and females



Graph 2 represents comparison of different stress causing factors among third year and final year and failing of course exam is the most frequent factor (67%) among third year students whereas rules and regulation extremism affected final year (40%).



DISCUSSION

The perception of stress is seen in all students of clinical years (third and final year) irrespective of gender. According to this study 27% students were suffering from severe stress while S Basudan¹⁸ study shows that 20.2% students are suffering from severe stress but study of Agolla showed 55% of severe stress among students¹⁹.

Factors that are cause of most stress among females are fear of failing course exam (65%), examination and grading (48%) and fear of not being able to cope up with workload (47%). It is due to their responsibilities to do household works so they are not able to have enough time for studies. Studies of Habeeb Kaj and Saguria G had reported same results^{21, 22} while Muirhead did not find role of gender in stress²³. The cause of stress may vary from year to year and gender. Mostly student have to balance between their studies and clinics so it can be stressful. Beside this regular tests and annual papers at the end of year is also stressful. The students have to make sure to complete their patient quota and attendance to complete their graduation requirement and after that to pass their tests and final annual papers. This is the reason of their stress. Besides the attitude of faculty and class mates is also the reason for stress as the studies of Agolla J and Acharya SJ had also perceived this^{19, 20}.

Lack of time to do schoolwork (36%), receiving criticism at work (34%) and attitude of faculty toward students (34%) are the factors for the reason of most stress among male students. It is because males are more concern with clinical work than studies. According to A Hayes study also, it is the common factor of stress²⁵. While P S Shalik study shows the main factor to induce stress is insecurity of future²⁴.

The perception of stress among different academic years is different. In third year severe stress is due to fear of failing course exam (67%) this result was similar to studies of Acharya SJ and Habeeb KAJ^{20, 22}, as it is the first clinical year so students are not able to cope up with studies while doing clinics. In final year most stress is due to rules and regulation. It may be due to pressure to act more responsible because of being the most senior class of dental school. The study of Parveen SS shows highest stress factor among third year student is academic factors and among final year highest stress causing factor is associated with faculty²⁴.

CONCLUSION

The result of this study shows that dental students of clinical years do suffer from stress. Syllabus and examination pattern should be amended to decrease stress as well as faculty attitude should be

more supportive. Counselling sessions should be arranged for students.

Conflict of interest: Nil

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