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RESEARCH ARTICLE

Stress among preclinical students in a private dental school in Jeddah, Saudi Arabia

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Vice Dean Dental program Assistant Professor Periodontology Department Ibn Sina Nationl College, Jeddah, Saudi Arabia owali@ibnsina.edu.sa **Introduction:** Dental schools are known to be highly demanding with a stressful learning environment. The stress when recognized in the preclinical years will help us to identify the coping strategies for the students so that they will be prepared for increased work load in the coming up years in the clinics.

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Aim: To identify and manage certain causes of stress in preclinical dental students at a private dental institute in Jeddah.

Methodology: This study is a questionnaire survey. It is a descriptive cross sectional study conducted among the second and third year male and female Bachelor of Dental Surgery (BDS) preclinical students.

Results: The reasons that cause stress in the preclinical students' perspective are that they feel that the amount of requirement is more so they are unable to get time for relaxation. They have a fully loaded day so they are stressed. Few students are having financial problems and others are facing personal problems where they had to postpone getting engaged, married and few married students had to postpone having children. The preclinical students are finding difficulty in understanding the subject. They are having stress from the teaching staff as they are unapproachable and there is no consistent feedback regarding their work being given by them. From the supervisors in their preclinical sessions they are having stress due to lack of availability of supervisors in the laboratory and the differences in opinion between them. The students are stressed due to the shortage of allocated laboratory time. According to the gender the males have exhibited more stress than females and the reasons attributed to this are difficulty in understanding lectures, fear of not having possibility to pursue a post graduate program and fear of being unable to catch up if getting behind with work.

Conclusion: This study was aimed to assess the perceived sources of preclinical students of a private dental school in Jeddah. The preclinical students showed an increase in stress levels.

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INTRODUCTION

Stress is defined as "pressure or worry caused by problems in somebody's life" [1] Stress can lead to depression, anxiety, substance misuse, absenteeism, diminished work efficiency, and burnout [2,3].

Dental student perspectives on the content, structure, and quality of their educational experience are an essential component of a broad-based assessment of the curriculum and more importantly stress. (4)

In European dental schools several sources of stress for students were identified, including limited leisure time, examination anxiety, and adapting to the clinical phase of dental education.(5)

In an Australian study, examinations and grades were found to be the most potent stressors, with the highest levels reported by students in their fourth year of training. (6)

A study of stress among dental students in Jordan similarly found examinations and grades to be the most stressful elements, along with limited time for relaxation or outside activities. (7)

In a study of Canadian dental students, a national survey found that students' top concerns about their academic program were lack of leisure time, procrastination, meeting faculty expectations for workload, and feeling powerless in the system. Problems with finances, motivation, and critical faculty attitudes were among the students' reported secondary concerns.(8)

The dental educational system in Saudi Arabia has an initial preparatory year followed by five years of dental schooling. In the five years the first two years deal with basics sciences in medicine and dentistry followed by clinical training from the third year. Dental schools are known to be highly demanding with a stressful learning environment. (9)

The stress when recognized before the students enter the clinics will help us to put into effect the coping strategies for them so that they will be prepared for increased work load in the coming up years in the clinics.

It is clear from many studies that dental students reliably report a number of stressful factors in the learning environment, including managing their workload, dealing with examination pressure, maintaining life balance, and developing positive relationships with faculty. (4) Stress can affect the performance of the student so there is a need to know what the causes for stress are so this study aims to identify and manage causes of stress in preclinical dental students at a private dental institute in Jeddah.

Methodology

This study is a questionnaire survey. It is a descriptive cross sectional study conducted among the second and third year male and female Bachelor of Dental Surgery (BDS) students. A self-administered questionnaire modified from dental environment stress (DES) (9) questionnaire consisting of sections, including "basic data" and "sources of stress" was developed. Personal information was not included in the questionnaire to avoid improper fed back from the students. It was validated for the students of a private dental institute in Jeddah Saudi Arabia. Although the medium of instruction of the college is English some of the students may experience difficulty in understanding questions so to avoid this limitation the questionnaire had the same question in English and Arabic. A 30-item questionnaire was administered for the preclinical students. All the students in the institute both males and females who were present on the day of the study were included in the survey. The questionnaire is based on a five point likert scale includes the stress levels to be graded by the students as: strongly agree, agree, true sometimes, disagree and strongly disagree.

The ethical clearance of the study has been taken from the ethical committee. The purpose of the study was communicated well in advance to the students, and student participation in the research was voluntary. They anonymously completed the study questionnaire in their classes prior to lectures. A total of 200 copies were distributed and 182 valid responses were obtained.

The statistical analysis was done using SPSS version 20. The percentages and frequencies were calculated and chi square analysis was done to check for association between the variables. The p value of < 0.05 has been considered as statistically significant.

Results

There were 182 second and third year students who had filled the questionnaire. The response rate of the study is 82%. The responses of the 182 second and third year students have been detailed in table 1.

41.2% of the students strongly agree that they have stress due to the amount of requirement they have. (p<0.05) 64% of the 2^{nd} and 3^{rd} year students strongly agree and agree that they do not have time for relaxation as they are having a fully loaded day (62.1%). (p<0.05) Nearly half of the students (53.3%) have inapproachability of teaching staff as a reason for stress. 42.3% students agree that finance is a cause of stress. (p<0.05) Personal reasons (postponement of engagement and marriage-36.8% and postponement of having children-50.6%) are causes of stress among the students. Less than half of the students (44.5%) are not able to understand literature and 50% have stressed due to lack of feedback from the staff. Non availability of supervisors (42.3%), difference in opinion between staff (54.9%) and shortage of allocated lab time (47.2%) are also stressors for the students. (p<0.05) There is a trend in the data which consistently shows more stress among the third year students compared to the second year students.

According to the gender the males have exhibited more stress than females and the reasons attributed to this are difficulty in understanding lectures, fear of not having possibility to pursue a post graduate program and fear of being unable to catch up if getting behind with work. The mean stress levels of the preclinical students have been detailed according to the gender and year of study on a five point scale in table 2.

Tables: Table 1: The responses of 2nd and 3rd year BDS students on stress

Table 1: The res	Strongly	Agree	True	Disagree	Strongly			
	agree	1-8-00	sometimes	21848100	disagree			
		N(%)	N(%)	N(%)	N(%)			
	N(%)							
1.		nount of assigned	work is more	-	•			
2 nd year BDS	18(22.8%)	26(32.9%)	22(27.8%)	9(11.4%)	4(5.1%)			
3 rd year BDS	57(55.3%)	27(26.2%)	9(8.7%)	7(6.8%)	3(2.9%)			
Total*	75(41.2%)	53(29.1%)	31(17.0%)	16(8.8%)	7(3.8%)			
2.	I feel the compet	I feel the competition with peers for getting good grades						
2 nd year BDS	25(31.6%)	21(26.6%)	22(27.8%)	6(7.6%)	5(6.3%)			
3 rd year BDS	31(30.1%)	31(30.1%)	30(29.1%)	8(7.8%)	3(2.9%)			
Total	56(30.8%)	52(28.6%)	52(28.6%)	14(7.7%)	8(4.4%)			
3.	I feel stressed du	ring examinations						
2 nd year BDS	38(48.1%)	16(20.3%)	14(17.7%)	7(8.9%)	3(3.8%)			
3 rd year BDS	69(67.0%)	17(16.5%)	12(11.7%)	2(1.9%)	3(2.9%)			
Total	107(58.8%)	33(18.1%)	26(14.3%)	9(4.9%)	6(3.3%)			
4.	I have difficulty in understanding lectures							
2 nd year BDS	12(15.2%)	22(27.8%)	24(30.4%)	12(15.2%)	9(11.4%)			
3 rd year BDS	27(26.2%)	19(18.4%)	40(38.8%)	11(10.7%)	6(5.8%)			
Total	39(21.4%)	41(22.5%)	64(35.2%)	23(12.6%)	15(8.2%)			
5.	I have lack of confidence to be a successful dental student							
2 nd year BDS	7(8.9%)	9(11.4%)	23(29.1%)	20(25.3%)	20(25.3%)			
3 rd year BDS	17(16.5%)	14(13.6%)	27(26.2%)	14(13.6%)	31(30.1%)			
Total	24(13.2%)	23(12.6%)	50(27.5%)	34(18.7%)	51(28.0%)			
6.	Having lack of confidence to be a successful dentist							
2 nd year BDS	4(5.1%)	16(20.3%)	18(22.8%)	16(20.3%)	25(31.6%)			
3 rd year BDS	15(14.6%)	15(14.6%)	23(22.3%)	18(17.5%)	32(31.1%)			
Total	19(10.4%)	31(17.0%)	41(22.5%)	34(18.7%)	57(31.3%)			
7.	Having lack of time for relaxation							
2 nd year BDS	24(30.4%)	13(16.5%)	29(36.7%)	9(11.4%)	4(5.1%)			
3 rd year BDS	62(60.2%)	18(17.5%)	13(12.6%)	3(2.9%)	7(6.8%)			
Total *	86(47.3%)	31(17.0%)	42(23.1%)	12(6.6%)	11(6.0%)			
8.	I have a fear of failing a course or the year							
2 nd year BDS	32(40.5%)	12(15.2%)	20(25.3%)	5(6.3%)	6(7.6%)			
3 rd year BDS	40(38.8%)	27(26.2%)	18(17.5%)	11(10.7%)	7(6.8%)			
Total	72(39.6%)	39(21.4%)	38(20.9%)	16(8.8%)	13(7.1%)			
9.		The rules and regulations of the faculty are difficult						
2 nd year BDS	26(32.9%)	17(21.5%)	23(29.1%)	7(8.9%)	2(2.5%)			

3 rd year BDS	54(52.4%)	18(17.5%)	23(22.3%)	5(4.9%)	3(2.9%)			
Total	80(44.0%)	35(19.2%)	46(25.3%)	12(6.6%)	5(2.7%)			
10.	I Feel lack of home atmosphere in living quarters/hostel							
2 nd year BDS	32(40.5%)	13(16.5%)	21(26.6%)	6(7.6%)	3(3.8%)			
3 rd year BDS	47(45.6%)	25(24.3%)	24(23.3%)	4(3.9%)	3(2.9%)			
Total	79(43.4%)	38(20.9%)	45(24.7%)	10(5.5%)	6(3.3%)			
11.	I fear of not having possibility to pursue a postgraduate program							
2 nd year BDS	16(20.3%)	15(19.0%)	23(29.1%)	15(19.0%)	6(7.6%)			
3 rd year BDS	30(29.1%)	22(21.4%)	26(25.2%)	13(12.6%)	12(11.7%)			
Total	46(25.3%)	37(20.3%)	49(26.9%)	28(15.4%)	18(9.9%)			
12.		bility of the teachi						
2 nd year BDS	20(25.3%)	16(20.3%)	24(30.4%)	6(7.6%)	9(11.4%)			
3 rd year BDS	39(37.9%)	22(21.4%)	25(24.3%)	12(11.7%)	5(4.9%)			
Total*	59(32.4%)	38(20.9%)	49(26.9%)	18(9.9%)	14(7.7%)			
13.			ch up if getting bel					
2 nd year BDS	21(26.6%)	16(20.3%)	20(25.3%)	12(15.2%)	6(7.6%)			
3 rd year BDS	34(33.0%)	26(25.2%)	26(25.2%)	12(11.7%)	5(4.9%)			
Total	55(30.2%)	42(23.1%)	46(25.3%)	24(13.2%)	11(6.0%)			
14.		unemployment aft						
2 nd year BDS	26(32.9%)	16(20.3%)	20(25.3%)	7(8.9%)	6(7.6%)			
3 rd year BDS	37(35.9%)	21(20.4%)	20(19.4%)	13(12.6%)	12(11.7%)			
Total	63(34.6%)	37(20.3%)	40(22.0%)	20(11.0%)	18(9.9%)			
15.			financial resource					
2 nd year BDS	10(12.7%)	22(27.8%)	24(30.4%)	11(13.9%)	8(10.1%)			
3 rd year BDS	25(24.3%)	20(19.4%)	20(19.4%)	21(20.4%)	17(16.5%)			
Total*	35(19.2%)	42(23.1%)	44(24.2%)	32(17.6%)	25(13.7%)			
16.		My marriage or engagement is postponed because of studies						
2 nd year BDS	17(21.5%)	14(17.7%)	16(20.3%)	6(7.6%)	21(26.6%)			
3 rd year BDS	25(24.3%)	11(10.7%)	14(13.6%)	21(20.4%)	32(31.1%)			
Total*	42(23.1%)	25(13.7%)	30(16.5%)	27(14.8%)	53(29.1%)			
17.		ostpone having chi						
2 nd year BDS	27(34.2%)	17(21.5%)	15(19.0%)	4(5.1%)	11(13.9%)			
3 rd year BDS	33(32.0%)	15(14.6%)	15(14.6%)	16(15.5%)	24(23.3%)			
Total*	60(33.0%)	32(17.6%)	30(16.5%)	20(11.0%)	35(19.2%)			
18.			father/dental stud					
2 nd year BDS	22(27.8%)	16(20.3%)	20(25.3%)	4(5.1%)	12(15.2%)			
3 rd year BDS	39(37.9%)	22(21.4%)	19(18.4%)	9(8.7%)	14(13.6%)			
Total	61(33.5%)	38(20.9%)	39(21.4%)	13(7.1%)	26(14.3%)			
19.		hysical health is a						
2 nd year BDS	17(21.5%)	16(20.3%)	22(27.8%)	11(13.9%)	9(11.4%)			
3 rd year BDS	39(37.9%)	16(15.5%)	25(24.3%)	13(12.6%)	10(9.7%)			
Total	56(30.8%)	32(17.6%)	47(25.8%)	24(13.2%)	19(10.4%)			
20.		ime needed to trav						
2 nd year BDS	36(45.6%)	13(16.5%)	16(20.3%)	4(5.1%)	6(7.6%)			
3 rd year BDS	43(41.7%)	21(20.4%)	20(19.4%)	9(8.7%)	10(9.7%)			
Total	79(43.4%)	34(18.7%)	36(19.8%)	13(7.1%)	16(8.8%)			
21.		aff towards womer						
2 nd year BDS	15(19.0%)	14(17.7%)	15(19.0%)	15(19.0%)	16(20.3%)			
3 rd year BDS	15(18.3%)	16(19.5%)	18(22.0%)	11(13.4%)	22(26.8%)			
Total	30(18.6%)	30(18.6%)	33(20.5%)	26(16.1%)	38(23.6%)			
22.	I have languag	ge barrier with tea	ching staff					
2 nd year BDS	16(20.3%)	14(17.7%)	24(30.4%)	14(17.7%)	6(7.6%)			
3 rd year BDS	26(25.2%)	20(19.4%)	31(30.1%)	13(12.6%)	13(12.6%)			
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Total 2			20(25.3%)	15(19.0%)	14(17.7%)	
	21(20.4%)	18(17.5%)	24(23.3%)	20(19.4%)	20(19.4%)	
• •	29(15.9%)	35(19.2%)	44(24.2%)	35(19.2%)	34(18.7%)	
	Availability of supervisors in laboratory					
	13(16.5%)	14(17.7%)	19(24.1%)	15(19.0%)	12(15.2%)	
	31(30.1%)	19(18.4%)	26(25.2%)	15(14.6%)	11(10.7%)	
	44(24.2%)	33(18.1%)	45(24.7%)	30(16.5%)	23(12.6%)	
	Shortage of allocated laboratory time					
	16(20.3%)	11(13.9%)	18(22.8%)	11(13.9%)	16(20.3%)	
	39(37.9%)	20(19.4%)	14(13.6%)	13(12.6%)	17(16.5%)	
	55(30.2%)	31(17.0%)	32(17.6%)	24(13.2%)	33(18.1%)	
	Differences in opinion between laboratory staff					
	14(17.7%)	17(21.5%)	18(22.8%)	9(11.4%)	15(19.0%)	
3 rd year BDS 5	51(49.5%)	18(17.5%)	18(17.5%)	10(9.7%)	6(5.8%)	
Total* 6	65(35.7%)	35(19.2%)	36(19.8%)	19(10.4%)	21(11.5%)	

^{*} Statistically significant

Table 2: The responses of male and female preclinical BDS students on stress

	Strongly agree N(%)	Agree N(%)	True sometimes N(%)	Disagree N(%)	Strongly disagree N(%)	
1.	I fear of not having possibility to pursue a postgraduate program					
Female	21 (36.8%)	10 (17.5%)	17(29.8%)	9(15.8%)	0(0%)	

Male	25(20.0%)	27(21.6%)	32(25.6%)	19(15.2%)	18(14.4%)	
Total*	46(25.3%)	37(20.3%)	49(26.9%)	28(15.4%)	18(9.9%)	
2.	I have fear of being unable to catch up if getting behind with work					
Female	24(42.1%)	15(26.3%)	14(24.6%)	4(7.0%)	0(0%)	
Male	31(24.8%)	27(21.6%)	32(25.6%)	20(16.0%)	11(8.8%)	
Total*	55(30.2%)	42(23.1%)	46(25.3%)	24(13.2%)	11(6.0%)	

^{*} Statistically significant

Discussion

The students of second and third dentistry showed a high degree of stress. There needs to be a focus on the development of interpersonal skills of communication in the students to coping strategy for stress as the study concludes that there is stress among preclinical dental students.

The reasons that cause stress in the preclinical students' perspective are that they feel that the amount of assigned work is more so they are unable to get time for relaxation. They have a fully loaded day so they are stressed. Few students are having financial problems and few are facing personal problems where in they had to postpone getting engaged, married and few married students had to postpone having children. The preclinical students are finding difficulty in understanding literature. They are having stress from the teaching staff as they are unapproachable sometimes and there is no consistent feedback regarding their work being given by them. In their preclinical sessions they are having stress due to lack of availability of supervisors in the laboratory and the differences in opinion between them. The students are stressed due to the shortage of allocated laboratory time.

Third year students are having more stress compared to the second year students. Preclinical year courses require lot of study (10) as a result of which they do not have time for relaxation. The preclinical students just enter the college so take time to adjust to the new environment of dental school which focuses on academics and performance resulting in less time available for other activities. (11) The students are facing a language barrier when they enter the professional college. High levels of stress among third year students may be associated with frustration over their expectation of the prestige of being a dentist, without realizing the challenges along the educational pathway. They may have had little preparation for the stresses of being in dental school, thus predisposing them to increased stress. (12) So they need to be prepared for the program and their future career.

The students feel that the amount of assigned work in fully loaded days is more and due to which they do not have any time for relaxation; these are also the major stressors in the study by Abu-Ghazaleh et al(13) who has used the same DES items to recognize the perceived sources of stress among the dental preclinical students. Overall self efficacy concerns, performance pressure and assigned work load appear as the perceived stressors for the study by Polychronopoulou et al.(14) If stress is recognized in the beginning before the students enter the clinics we can put into effect the coping strategies for the students so that they will be prepared for increased work load in the coming up years in the clinics. An orientation session by the senior students to the juniors on work load and amount of assigned work in courses would prepare the juniors well in advance in the beginning of every course. A clear evaluation of the students work load is essential at regular intervals.

Financial reasons for stress have equivocal studies saying that it is a cause of stress as by Morze et al,(15) Muirhead et al(16) and Tangade et al(17) and is not a source of stress by Abu- Ghazaleh et al,(13) Polychronopoulou et al(14) and Acharya et al. (18) Student debt was related to high academic and social stress course in a study by Uskun et al.(19) The reasons attributed to high stress due to financial resources may be because studying in a private university maintaining GPA above 2.75 is important to get a full scholarship from the government. There is a review of the GPA of the students every semester for a grant from government which could be a major cause of stress.

Difference of opinion among the staff and inconsistency of feedback by them has lead to stress among preclinical students in our study and the study by Dahan et al(20). Slow learners get affected by this due to fear of failure. So there needs to be an improvement in the relationship between dental students and educators through various strategies. One of the strategies may be to encourage students' participation in extracurricular activities. The development of these strategies is very important as it can improve professionalism among the students to be good future dentists. Extra classes in some courses might be beneficial for students where time and efforts help those understanding subjects. The staff needs to be calibrated so that there is uniformity in teaching and assessment of the students.

Students have responded that the non availability of the staff in the preclinical sessions and shortage of allocated laboratory time are other causes of stress. All the students showing their work in the last few days of completion of requirements may have caused them to get a feeling that there is non-availability of staff and shortage of allocated time. Student orientations need to be done at regular intervals to make them complete their work on time. The emphasis on time management is essential in preclinical years.

Personal family reasons like postponement of engagement or marriage and children among the married students are a cause of stress in contrast to a study by Schele et al(21). A support system from the family is very important for the students to have a stress free time in dental schools. An orientation of the family is recommended to reduce the stress.

The stress was found to be correlated with gender from the responses in Uskun et al(19) and males suffered more compared with females as in our study. Acharya et al(18) also concluded that male students perceived more stress than female students. Males in the present study have more stress than the females but in contrast to a study by Naidu et al(3) in which the female students exhibited significantly more stress on academic domains. The reason could be due to consistent low grades among the male students. There is a need to identify the students coping strategy that determine the impact or disturbance caused by the stress and an in depth analysis is recommended for the same.

Conclusion

This study was aimed to assess the perceived sources of preclinical students of a private dental school in Jeddah. The preclinical students showed an increase in stress levels. Males have exhibited more stress than females. It is recommended that further studies be planned also taking into consideration the GPA of the students for an in-depth analysis of grades which could be a cause of stress. The stress among the clinical students also needs to be analyzed and compared to the stress levels among the preclinical students. It is recommended that there should be stress management programs conducted at regular intervals to reduce the stress levels among the students.

References

- 1. Westerman GH, Grandy TG, Ocanto RA, Erskine CG (1993) Perceived sources of stress in the dental school environment. J Dent Educ 57: 225-231.
- 2. Freeman R, Main JR, Burke FJ (1995) Occupational stress and dentistry: theory and practice. Part I. Recognition. Br Dent J 178: 214-217.
- 3. Naidu RS, Adams JS, Simeon D, Persad S (2002) Sources of stress and psychological disturbance among dental students in the West Indies. J Dent Educ 66: 1021-1030.
- 4. Henzi D1, Davis E, Jasinevicius R, Hendricson W, Cintron L, Isaacs M. Appraisal of the dental school learning environment: the students' view. J Dent Educ. 2005 Oct;69(10):1137-47.
- 5. Pohlmann K, Jonas I, Ruf S, Harzer W. Stress, burnout and health in the clinical period of dental education. Eur J Dent Educ 2005;9:78-84.
- 6. Sanders A, Lushington K. Sources of stress for Australian dental students. J Dent Educ 1999;63:688-97.
- 7. Rajab LD. Perceived sources of stress among dental students at the University of Jordan. J Dent Educ 2001:232-41.
- 8. Bradley IF, Clark DC, Eisner JE, De Gruchy K, Singer DL, Hinkleman K, et al. The student survey of problems in the academic environment in Canadian dental faculties. J Dent Educ 1989;53:126-31.
- 9. Al Samadani KH, Al Darrab A. The perception of stress among clinical dental students. World Journal of Dentistry. 2013;4(1):24-28.
- 10. Kumar S, Dagli RJ, Mathur A, Jain M, Prabu D, Kulkarni S. Perceived sources of stress amongst Indian dental students. Eur J Dent Educ 2009; 13(1): 39-45.

- 11. Hendricks SJH, Joshi A, Crombie K, Moola MH. Perceived source of stress among black dental students in South Africa. J Dent Edu 1994; 58; 406-10.
- 12. Ahmad MS, Yusoff MMM, Razak IA. Southeast Asian J Trop Med Public Health. 2011; 42(4): 996-1004.
- 13. Abu-Ghazaleh SB, Rajab LD, Sonbol HN. Journal of Dental Education. 2011; 75(8): 1107-1114.
- 14. Polychronopoulou A, Divaris K. Perceived Sources of Stress Among Greek Dental Students. Journal of Dental Education. 2005;69(6):687-692.
- 15. Morse Z, Dravo U. Stress levels of dental students at the Fiji School of Medicine. Eur J Dent Edu 2007; 11(2): 99-103.
- 16. Muirhead V, Locker D. Canadian Dental student's perception of stress and social support. Eur J Dent Edu. 2008; 12: 144-148.
- 17. Tangde PS, Mathur A, Gupta R, Chaudhary S. Assessment of stress level among dental school students: An Indian outlook. Dental Research Journal. 2011; 8(2):95-101.
- 18. Acharya S. Factors affecting stress among Indian dental students. J Dent Educ 2003: 67: 1140–1148.
- 19. Uskun E, Kisioglu AN, Ozturk M. Stress and its effects on depression and anxiety among under graduates. Primary Care and Community Psychiatry. 2008; 13(2): 73-82.
- 20. Dahan H, Bedos C. A typology of dental students according to their experience of stress: A qualitative study. Journal of Dental Education. 2010;74(2):95-103.
- 21. Schele IA, Hedman LR, Hammarstrom A. Amodel of pschychosocial work environment, stress, and satisfaction among dental students in Sweden. Journal of Dental Education. 2012;76(9):1206-1217.