

# Stress and Academic Performance of Dental Clinicians in one Private University in the Philippines

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**Abstract** – *The study determined the stress and academic performance among dental clinicians of LPU College of Dentistry for the academic years 2012-2013 and 2013-2014. Specifically, it determined the profile of the dental clinicians in terms of age, year level and gender. It also identified the level of stress in terms of living accommodation, interpersonal relationship, academic performance, clinical skills and miscellaneous factor; to analyze the academic performance based on the general weighted average of the dental clinicians per semester. It also determined the significant responses in the level of stress when grouped according to profile variables and the relationship between stress and academic performance. The findings showed that a moderate level of stress was experienced by the respondents with regards to the following factors namely: living accommodation, academics and clinical skills. As to the academic performance of the respondents, it decreased from satisfactory to fairly satisfactory as the academic year progresses to clinical training. Differences of the responses as to the level of stress between respondents differ as academic year progresses in congruence with the age bracket but as to the gender, no significant difference was determined.*

**Keywords** – *Academic Performance, Dental Clinicians, Stress*

## INTRODUCTION

Higher education constitutes an extremely significant institution in the development of the country. Responding to the challenges brought by the global challenges, the educational system has felt the need to reshape its educational landscape. Care for the students' wellbeing, not only academically but also emotionally and psychologically, is tantamount to

their success without jeopardizing the academic process.

Dentistry is a program of study wherein knowledge is not the only component but also must have great manual dexterity to maneuver the concept of the study. It is a six year degree program composing of two year preparatory to dentistry and another four years of dentistry proper. During the first two year course preparatory, the students take general course subject as well as introduction to medical subjects as groundwork for a more complex field of study. And the four years dentistry proper both medical and dental subjects were given emphasis. During these years they were trained to handle first the mannequins and later, to live patients when professors see that they were already prepared to handle the case. Knowledge and manual dexterity are the keys to be a professional dentist.

Dental Education has been asserted as one of the most challenging, demanding, and stressful fields of study, as dental students are expected to acquire diverse competencies and interpersonal skills [1],[2]. A considerable body of literature had considered dentistry to be associated to high level of stress [3,4,5,6] and prolonged stress has been linked to a wide range of negative outcome such as reduced academic performance, unprofessional conduct, burnout and maybe predispose to mental and physical disability [7]-[9]. Stressor associated with dentistry includes time and scheduling pressures, managing uncooperative patients and highly technical and intensive nature [10]-[12]. The dental curriculum require students to achieve diverse characteristics aside from theoretical knowledge, students must also be proficient in their clinical skills as well as interpersonal relation with their patients [13].

These academic processes are undertaken by dental students causing them a lot of stress. Stress is the body's way of responding to any kind of demand.

It is a state of mental or emotional strain or tension resulting from adverse or very demanding circumstances [14]. It can be caused by working too much or too hard in the job(s), school, or home. It can also be caused by not knowing how to manage your time well or how to take time out for rest and relaxation. This can be one of the hardest kinds of stress to avoid because many people feel this is out of their control. An optimal level of stress enhances learning while excess of stress can cause health problems. This results in reduction of students' self-esteem and affects their academic achievement. A high level of stress may have negative effect on cognitive functioning and learning of student [15].

Academic performance represents outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university [16]. Academic performance is one of the most vital considerations among students in higher education level and this can be illustrated by grade point average (GPA). It is the general weighted average of the students per semester. Several studies identified internal and external factors associated with academic performance. Specifically, stressful academic situation reduce the working memory available to attend to a task's information processing requirements and to control its execution [17].

The stress associated with academic and clinical performance experienced by the dental clinicians, as displayed by their changes in behaviour, anxiety, and inability to finish the requirements, if carried on, can be detrimental to their professional career in the future. Occupational stress among dentist has been widely reported in many literatures and may have their origin in the dental educational process. Preventive modalities can help the students, if addressed early on in the dental school, manage stress and enjoy the profession for its novelty and rewards.

The effect of long and untreated stress can lead to depression even after the dental clinicians had graduated [18],[19]. It is the aim of the study to evaluate the effect of stress to the academic performance to prevent its undesirable effect to the dental clinicians academically and psychologically.

#### **OBJECTIVES OF THE STUDY**

The study determined the stress and academic performance among dental clinicians of LPU College of Dentistry for the academic years 2012-2013 and 2013-2014.

Specifically, it determined the profile of the dental clinicians in terms of age, year level and gender. It also identify the level of stress in terms of living accommodation, interpersonal relationship, academic performance, clinical skills and miscellaneous factor; analyze the academic performance based on the general weighted average of the dental clinicians per semester; determine the significant responses in the level of stress when grouped according to profile variables and determine the relationship between stress and academic performance; and finally, propose an action plan based on the findings.

#### **METHODS**

##### **Research design**

This study used descriptive research design. Descriptive survey method is appropriate for data derived from simple observational situation, whether these are actually physically observed through the use of a questionnaire or poll techniques [20].

##### **Participants**

The study used 65 dental clinicians or 100 percent of the junior and senior dental clinicians for the school year 2012-2013 and 2013-2014. Dental clinicians are students with both clinical duties treating patients in the morning and attending dental lectures in the evening.

##### **Instrument**

Part 1 of the study used a survey questionnaire to determine the level of stress of the respondents. A modified version of the Dental Environmental Stress questionnaire adopted from Garbee et al. [21] format to make the survey suitable to the investigative design. This instrument measured the sources and level of stress as well as stress management activities employed by the Dentistry students. The DES questionnaire is a close-ended questionnaire, containing thirty nine questions pertaining to potential stressor factors like living accommodation, interpersonal relationship, academic performance, clinical skills and miscellaneous factors. It is a measure of the level stress composed of thirty nine questions verbally and numerically interpreted as causing "no stress" (0), causing a "mild level of stress" (1), causing a "moderate level of stress" (2), causing a "high level of stress" (3) and causing a "severe level of stress" (4). The degree or level of stress will be classified as: 3.50 – 4.00 = causing severe level of stress (SS); 2.50 – 3.49 = causing high level of stress (HS); 1.50 – 2.49 = causing moderate

level of stress (Mos); 1.00 – 1.49 = causing mild level of stress (MiS); 0-0.99 = causing no stress at all (NS)

Part 2 used a documentary analysis by collecting the Grade Point Average (GPA) of the students to measure the academic performance on first and second semester for the AY 2012- 2013 and 2013-2014. All data gathered were kept confidential.

### Procedure

The respondents were informed on the purpose of the study and will be invited to participate. The researchers administered the questionnaires personally.

### Data Analysis

The data collected were classified, tabulated and coded for analysis. Frequency count and percentage were used in the distribution of the respondent's profile, weighted mean and rank were utilized for the level of stress, and Pearson product moment correlation coefficient and analysis of variance (ANOVA) were used for the difference of responses among variables. The aforementioned statistical tools were employed in interpreting the data obtained from the survey.

## RESULTS AND DISCUSSION

Table 1 showed the profile of the respondents. Majority of the respondents were female accounting to 75.8 percent while 24.2 percent were male. As most of the enrollees in the college of Dentistry were mostly female.

**Table 1. Percentage Distribution of the Respondents' Profile**

Profile Variables	f	%
<b>Gender</b>		
Male	16	24.20
Female	50	75.80
<b>Year Level</b>		
DDM 3	26	39.40
DDM 4	40	60.60
<b>Age</b>		
19 years old	6	9.10
20 years old	21	31.80
21 years old	13	19.70
22 years old	15	22.70
23 years old	8	12.10
25 years old	1	1.50
29 years old	1	1.50
30 years old	1	1.50

Out of 66 respondents, 60.6 percent were from DDM 4 and 39.4 percent were from DDM 3. The senior clinicians or DDM 4 were more than the junior

clinicians due to the number of senior students who were still not yet finished with their clinical requirements thereby extending their stay in the college. Most of the respondents belong to the age 20 years old accounting to 31.8 percent followed by 23 years old and 21 years old.

**Table 2. Level of Stress in terms of Living Accommodation**

Indicators	WM	VI	Rank
1. Moving away from home.	1.73	MoS	4
2. Environment in which to study.	2.12	MoS	1
3. Lack of home atmosphere.	1.94	MoS	3
4. Other problems with accommodation.	1.98	MoS	2
<b>Composite Mean</b>	<b>1.94</b>	MoS	

Table 2 presented the level of stress in terms of living accommodation by the respondents with composite mean of 1.94 and verbally interpreted as moderate stress. The top in the rank was environment in which to study with the weighted mean (2.12) followed by other problems concerning with accommodation (1.98), followed by lack of home atmosphere (1.94), and lastly moving away from home (1.73).

The moderate level of stress was noted among the responses of the respondents. This can be due to the fact that most of the respondents in the study were living away from home such as boarding houses or dormitory as per respondents' interview. This can generate stress due to lack of supportive family members that can give both emotional and material support and household chores like laundry, room cleaning and cooking that must be done independently which can also affect their time for study. These findings parallel the investigation of Tangade [11] where Indian dental students lived in hostels suffer an elevated level of stress in comparison to students who lived with their families.

Table 3 shows the level of stress of the respondents in terms of interpersonal relationship with the composite mean of 1.41 and verbal interpretation of mild level of stress. Of the eleven questions given to the respondents, four items were identified as producing a moderate level of stress such as lack of time for relaxation (2.3), financial responsibilities (2.12), personal physical health (1.97) and having multiple roles (1.7) while the seven remaining queries were found to be producing a mild level of stress.

**Table 3. Level of Stress in terms of Interpersonal Relationship**

Indicators	WM	VS	Rank
1. Making friends.	1.35	MiS	6
2. Financial responsibilities	2.12	MoS	2
3. Personal physical health	1.97	MoS	3
4. Relationship between members of opposite sex.	1.30	MiS	7
5. Necessity to postpone marriage.	0.62	MiS	10.5
6. Necessity to postpone children.	0.62	MiS	10.5
7. Having multiple roles.	1.70	MoS	4
8. Conflict with spouse/mate over career development	1.06	MiS	8
9. Lack of time for relaxation.	2.30	MoS	1
10. Having children in the home.	1.05	MiS	9
11. Having reduced holidays compared with other students.	1.41	MiS	5
<b>Composite Mean</b>	<b>1.41</b>	<b>MiS</b>	

Lack of relaxation of the students can be attributed to the factor that most of the students were living in boarding houses/ dormitories thereby living with other people would affect the interpersonal relationship. In a multi-country study of Polychronoupoulou [22] regarding the sources of stress of dental students, he identified that Croatian students were among respondents with high concern on the lack of relaxation.

Relationship between members of the opposite sex, making friends, necessity to postpone marriage, necessity to postpone children, conflict with spouse/ mate over career development and having children in the home were found to be of mild level of stress among the respondents. The following interpersonal data were not among the top priorities of the Dentistry students due to unavailability of time for dating and financial issues as stated above makes the respondents forego marriage and children and focus on finishing the course. Also, the students in their six year stay in the course, had developed a strong sense of camaraderie to sustain the dental course.

**Table 4. Level of Stress in terms of Miscellaneous**

Indicators	WM	VI	Rank
1. Fear of going out due to crime.	1.12	MiS	1
2. Dependencies (drugs, alcohol, etc.)	0.86	NS	2
<b>Composite Mean</b>	<b>0.99</b>	<b>NS</b>	

Level of stress in terms of miscellaneous was presented in table 2.3 with the composite mean of 0.99

and verbal interpretation of no stress at all. Of the two questions on miscellaneous, fear of going out due to crime (1.12) ranked first and dependencies on drugs and alcohol (0.86), ranked second with the verbal interpretation of mild level of stress and no stress at all, respectively. Health-damaging behaviors such as tobacco and alcohol consumption, use of drugs and medication are commonly reported in literature as responses to stress in dental students[23,24].

**Table 5. Level of Stress in terms of Academics**

Indicators	WM	VI	Rank
1. Expectation versus reality in dental school.	2.29	MoS	6
2. Approachability of staff.	1.80	MoS	11.5
3. Criticism about academic or clinical work.	2.32	MoS	5
4. Rules and regulations of the dental school.	2.26	MoS	7
5. Discrimination due to race, nationality, gender, or social class.	1.17	MiS	13
6. Amount of assigned coursework.	2.23	MoS	8
7. Difficulty of coursework.	2.59	HS	3
8. Fear of being able to catch up if falling behind.	2.58	HS	4
9. Competition for grades.	1.80	MoS	11.5
10. Fear for failing course or year.	2.71	HS	2
11. Uncertainty about dental career.	2.05	MoS	10
12. Examinations.	2.74	HS	1
13. Lack of input in decision making process in dental school.	2.21	MoS	9
<b>Composite Mean</b>	<b>2.21</b>	<b>MoS</b>	

Table 5 presented the level of stress in terms of academic. Of the thirteen questions in this category, four items were identified as producing a high level of stress by the respondents: Examination (2.74), Fear of failing the course (2.71), Difficulty of course work (2.59) and Fear of being unable to catch up if falling behind (2.58). The mentioned categories were very much needed to focus into by the dental students because in order to advance in the clinic, a student must first be knowledgeable in the theoretical before being allowed to handle live patients in the clinic.

Seven questions were identified as producing a moderate level of stress namely criticism about the academic or clinical work (2.32), Expectation versus reality in dental school (2.29), Rules and regulations of the dental school (2.26), amount of assigned coursework (2.23), lack of input in decision making

process in dental school (2.21), uncertainty about dental career (2.05), Competition for grades and approachability of staff (1.8). And last, discrimination due to race (1.17) was accounted for as producing the least level of stress. Performance of skills in handling patients is very important in the dentistry program. The embodiment of knowledge into skill performance is highlighted by the different criteria every dental students must uphold to maintain the quality of their work. The faculty members of the college high regard for quality of work of the students results in the very satisfactory result of the Dentist licensure examination released by the Professional Regulation Commission. The professional ethics displayed by the dean and faculty were exemplified by the fair treat of their students regardless of nationality, gender or social class.

These findings were congruent with the study of Harikiran [25] and Tangade [10] to the dental students in India were examination and fear of failing the course increased their level of stress. Among other nationalities with high concern on examination and grades were the Spanish dental students according to the multi-country study of Polychronopoulou [22].

**Table 6. Level of Stress in terms of Clinical Skills**

Indicators	WM	VI	Rank
1. Concerns about manual dexterity.	2.17	MoS	9
2. Transition to clinical course.	2.39	MoS	4
3. Learning precision manual skills.	2.30	MoS	5
4. Completing clinical requirements.	2.76	HS	2
5. Concerns about treatment grades awarded.	2.24	MoS	6
6. Differences in opinion between clinical staff concerning treatments.	2.20	MoS	8
7. Shortage of allocated clinical time.	3.11	HS	1
8. Patient management	2.47	MoS	3
9. Confidence in all clinical decision making.	2.23	MoS	7
<b>Composite Mean</b>	<b>2.43</b>	<b>MoS</b>	

Table 6 presents the level of stress of the Dentistry students in terms of clinical skills in which the composite mean was 2.43 and interpreted as moderate level of stress. The table reported nine questions in which two of the items were deemed to be producing a high level of stress according to the respondents namely shortage of allocated clinical time

(3.11) and completing clinical requirements (2.76), while seven items were reported to produce a moderate level of stress.

Ideal cases for each clinical requirement are needed in order to be accepted as a case requirement. These cases if dependent only on patient flow in the dental dispensary can be very limited. Student resourcefulness and interpersonal skills are needed to suffice the cases needed. Changing weather conditions such as storm, school activities and holidays are factors that can affect time for which the students finish their clinical cases. These factors as well as patient no showing up during appointments, approachability of the staff, criticism about academics and clinical work can elevate the stress level of the students.

In the study of Acharya [11] on the factors affecting stress among Indian students, he noted that getting ideal cases for the clinical requirements as well as students seeking out to look for these cases are major stress factors for the dental students in association with examination.

**Table 7. Dental Students' Academic Performance Based on the General Weighted Average**

Semester	GWA	VI
1 <sup>st</sup> sem (2012 - 2013)	2.49	Satisfactory
2 <sup>nd</sup> sem (2012 - 2013)	2.54	Fairly Satisfactory
1 <sup>st</sup> sem (2013 - 2014)	2.57	Fairly Satisfactory
2 <sup>nd</sup> sem (2013 - 2014)	2.54	Fairly Satisfactory

*Legend: 1.00 = Outstanding; 1.25 = Excellent; 1.50 = Superior; 1.75 = Very Good; 2.00 = Good; 2.25 = Satisfactory; 2.50 = Fairly Satisfactory; 2.75 = Fair; 3.00 = Passing*

Table 7 showed the dental student's academic performance based on the general weighted average. As the dental students advance in the clinical years of the course, the general weighted average of the respondents decreases from satisfactory to fairly satisfaction. The respondents' transition from DDM 2 to junior clinician (DDM3) created a different environment from classroom to clinic. This was manifested by the "satisfactory" result of the study. As the junior clinicians advances to senior clinicians, the difficulty of finding and managing patients produce a load manifested in the "fairly satisfactory" result of the study.

This goes to show that the academic performance of the students were hindered due to lack of time and concentration on their studies which may be attributed to the need to look for patients to complete their clinical requirements, time and scheduling pressure, managing uncooperative patients and highly technical

and intensive nature of work [11]. In the study of the relationship between burnout and professional conduct and attitudes among US medical students, the findings showed the prolonged psychological stress can reduce academic performance of the students [8].

**Table 8. Difference of Responses on the Level of Stress When Grouped According to Year Level (YL)**

Level of Stress	YL	N	Mean	t-value	p-value
Living Accommodation	3	26	1.87	0.527	0.600
	4	40	1.99		
Interpersonal	3	26	1.59	2.202*	0.031
	4	40	1.29		
Miscellaneous	3	26	1.40	0.986	0.328
	4	40	1.22		
Academics	3	26	2.56	3.047*	0.003
	4	40	1.99		
Clinical Skills	3	26	2.77	2.434*	0.018
	4	40	2.21		

Legend: \*Significant at  $p$ -value  $< 0.05$ ; Junior (3); Senior (4)

As seen from the results of Table 8, only interpersonal (F-value = 2.202), academics (F-value = 3.047) and clinical skills (F-value = 2.434) shows significant difference when grouped according to year level. This was observed from the obtained p-values of 0.031, 0.003 and 0.018 which were less than 0.05 level of significance. Therefore the null hypothesis of no significant difference on the level of stress (interpersonal, academics and clinical skills) when grouped according to year level is rejected. The significant difference in the responses in terms of interpersonal skills maybe attributed to the lack of time they needed to relax because during their free time they need to study and look for patients and the financial responsibilities for the dentistry program requirements can be quite expensive due to the dental materials and instrument they need to purchase for use in the clinic. As for academics, the pressure of examination, passing the course and preparation for the mock board examination of the senior clinicians can be an added factor as to the difference in the responses. While clinical skills were a major factor in finishing the dentistry program because of the number of clinical requirements they need to finish as well as managing different types of patients that can also affect the outcome of the treatment. The result showed that the level of stress that was experienced by the dental clinicians from level 3 differs from those who are already on their 4<sup>th</sup> year who were graduating and

raising against time to finish the program after six (6) years.

The findings implied that as the students' progress in the academic program, specifically in the transition into clinical training the overall level of stress increases. This finding was in agreement with the study in West Indies regarding the sources of stress and psychological stress among dental students [26].

**Table 9. Difference of Responses on the Level of Stress When Grouped According to Profile Variables (Gender)**

Level of Stress	G	N	M	t-value	p-value
Living Accommodation	M	16	2.17	1.095	0.278
	F	50	1.87		
Interpersonal	M	16	1.53	1.023	0.310
	F	50	1.37		
Miscellaneous	M	16	1.46	1.078	0.285
	F	50	1.23		
Academics	M	16	1.95	1.555	0.125
	F	50	2.30		
Clinical Skills	M	16	2.35	0.395	0.694
	F	50	2.46		

Legend: \*Significant at  $p$ -value  $< 0.05$

Table 9 presented the difference the responses on the level of stress when grouped according to gender. It can be gleaned from the table that all computed t-values were all less than the critical value and the resulted p-values were all greater than 0.05 level of significance, thus the researchers fail to reject the null hypothesis of no significant difference on the level of stress when grouped according to gender. This implies that whether dental clinicians are male or female, the level of stress that they encountered in terms of living accommodation, interpersonal, miscellaneous, academics and clinical skills are the same.

This goes to show the profile of the respondents, in this study, is not a determining factor to the level of stress experienced by the respondents. This finding was similar to the studies from Canada [27] and seven European dental schools [28] but in contrast with other studies done in India where male dental students had a higher level of stress than their female counterpart [10], [11], [13].

Table 10 describes the difference of the responses on stress level in terms of age by the respondents. Living accommodation and interpersonal relationship, from the different age bracket was found to be not significant but in terms of miscellaneous clinical and academics, level of stress increases with age and interpreted statistically as significant. The investigation showed that stress level increases across

the years with the highest age bracket showing the highest level of stress and the younger age bracket showing lowest level of stress. It also reveals that as the students stay longer in dental school the higher the level of stress that can be attributed to increased financial burden and family expectations.

**Table 10. Difference of Responses on the Level of Stress When Grouped According to Profile Variables (Age)**

Level of Stress in terms of:	N	Mean	F-value	P-value	
Living accommodation	19	6	2.13	0.137	0.995
	20	21	1.89		
	21	13	1.79		
	22	15	1.97		
	23	8	2.09		
	25	1	1.75		
	29	1	2.25		
30	1	2.25			
Interpersonal	19	6	1.53	1.391	0.226
	20	21	1.58		
	21	13	1.16		
	22	15	1.40		
	23	8	1.23		
	25	1	2.00		
	29	1	0.80		
30	1	2.00			
Miscellaneous	19	6	1.17	2.206*	0.047
	20	21	1.48		
	21	13	1.10		
	22	15	1.51		
	23	8	0.75		
	25	1	1.67		
	29	1	0.00		
30	1	2.33			
Academics	19	6	2.46	3.166*	0.007
	20	21	2.59		
	21	13	2.27		
	22	15	1.95		
	23	8	1.82		
	25	1	1.62		
	29	1	0.00		
30	1	1.77			
Clinical skills	19	6	2.89	2.2*	0.047
	20	21	2.72		
	21	13	2.40		
	22	15	2.03		
	23	8	2.56		
	25	1	1.56		
	29	1	0.00		
30	1	2.22			

Legend: \*Significant at  $p$ -value  $< 0.05$

**Table 11. Relationship Between the Academic Performance and Level of Stress**

Level of Stress in terms of:	r-value	p-value	Interpretation
Living Accommodation	0.053	0.674	Not Significant
Interpersonal	-0.124	0.323	Not Significant
Miscellaneous	-0.161	0.196	Not Significant
Academics	-0.185	0.137	Not Significant
Clinical Skills	-0.131	0.293	Not Significant

Legend: Significant at  $p$ -value  $< 0.05$

Table 11 presented the relationship between the academic performance and level of stress of the respondents. Based from the result, all computed r-values indicates negligible correlation or association and the resulted p-values were all greater than 0.05 level of significance, therefore the researchers fail to reject the null hypothesis of no significant relationship between the respondents' academic performance and the level of stress they encountered.

This only shows that the students' academic performance is not affected by the stress that they experienced inside and outside the school. It goes to show that the relaxing atmosphere exhibited by the clinical instructors in the dental dispensary during the respondent's clinical training help them to cope up with stress as well as presence of family's moral support can enhance the coping mechanism of the respondents to stress, as they were able to voice out problems and concerns regarding the course. Good communication to people the respondent's trust can be a good stress reliever and reduces fatigue. This finding can also be attributed to the open communication of the department head and the students together with their parents during the college orientation before they enter the clinical internship. It makes them more aware and prepared to the expectations in the clinic. Parents also tend to be more supportive of their children.

#### CONCLUSION AND RECOMMENDATION

Majority of the respondents in the study were females, from DDM 4 or senior clinicians with the age range of 20 to 22 years old. A moderate level of stress was experienced by the respondents with regard to the following factors namely: living accommodation, academics and clinical skills. The academic performance of the respondents in to clinical training decreases from satisfactory to fairly satisfactory as the academic year progresses. Differences of the responses as to the level of stress between respondents differ as the academic year progresses in congruence

with the age bracket but no significant differences as to the gender. Academic performance of the respondents was not affected by the level of stress they experience inside and outside the school.

It is recommended that the Provision of a library area in the department where the students can relax and study. Intervention should be done as early as the first sign of deteriorating performance caused by absenteeism, poor patient management etc. Preventive measures should be done to supplement whatever is not absorbed by students thus helping them uplift their morale and improve their academic performance.

Faculty development programs that focus on stress management in order to reduce its impact on mental health and academic achievement of the students. It is also suggested to have a schedule of revisits for review of curriculum and syllabi in order to realign the learning of the students with the current trends of the profession. Personalized monitoring of students' performance by providing adviser who will be responsible in the guidance of students is also recommended. Action plan was proposed to enhance the interpersonal relationship of clinical skills and academic performance.

#### REFERENCES

- [1] Divaris K, Barlow PJ, Chendrea SA, Cheong WS, Dounis A, Dragan IF, et.al. (2008) The Academic Environment: The students' perspective, *Eur J Dent Educ* Vol. 12 (Supp1): 120-30
- [2] Plasschaert A, Holbrook WP, Delap E, Martinez C, Walmsley AD (2005), Profile and competencies for European dentist. *Eur J Dent* Vol 9 (3):98-107
- [3] Davis EL, Tedesco LA, Meier ST,(1989) Dental Students Stress, burnout and memory. *J Dent Educ* 53:193-195
- [4] Divaris K, Mafla AC, Villa-Torres, Molina M, Gomez CL, (2013) Psychological Distress and its correlates among dental students: a survey of 17 Colombian dental schools, *BMC Medical Education* 13:91 <http://www.biomedcentral.com/1472-6920/13/91>
- [5] Dutta AP, Pyles MA, Miederhoff PA, (2005), Stress in health professions students: myth or reality? A review of the existing literature. *J Natl Black Nurses Assoc*, 16:63-68
- [6] Schmitter M, Liedl M, Beck J, Rammelsberg P, (2008), Chronic Stress in medical and dental education. *Med Teach*, 30:97-99
- [7] Pasnau RO, Stoessel P (1994), Mental Health services for medical students. *Med Educ* 1994, 28:33-39
- [8] Dyrbye LN, Massie FS, Eacker A, Harper W, Power D, Durning SJ, Thomas MR, Moutier C, Satele D, Shanafelt TD (2010), Relationship between burnout and professional conduct and attitudes among medical students. *JAMA*, 304:1173-1180
- [9] Lempp H, Seale C, (2004) The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching *BMJ* 329:770-773
- [10] Tangade PS, MMathur A, Gupta R, Chaudhary S,(2011), Assessment of stress level among dental school students: an Indian outlook.*Dental Research Journal (Isfahan)* 2011 Spring;8(2):95-101
- [11] Ancharya S , (2003) Factors affecting stress among Indian dental students *J Dent Educ* 2003;67(10):1140-8
- [12] Rajab LD, (2001) Perceived sources of stress among dental graduates at the University of Jordan *J Dent Educ* 65(3): 232-41
- [13] Kumar S, Dagli RJ, Mathur, Jain M, Prabu D, Kulkani S.( 2009), Perceived sources of stress among Indian dental students. *Eur J Dent* 13(1):39-45
- [14] Meriam and Webster dictionary
- [15] Abdulghani HM, Al Kanhal AA, Mahmoud ES, Ponnampereuma GG, Alfaris EA. (2011), Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. *J Health Pop Nutr* 2011; 29:516-22.
- [16] Steinmyr R, Meibner A, Weidinger AF, Wirthwein L., (2015) Academic achievement. <https://goo.gl/26wcl0>, retrieved Jan. 28, 2016.
- [17] Beilock, SL (2008). Math performance in stressful situations. *Current Direction in Psychological Science*, 17, 339-343.
- [18] Vishal Reddy D, Naveenm N, Prabu, Sunayana Manipal, Preeth A, Adel Ahmed, (2013), The evaluation of the perceived stress and depression in dental undergraduates, *International Dental Journal of Student's Research* February 2013-May 2013/Vol. 1, Issue 4
- [19] Madhan B, Ajay Singh Rajpurohit, Haritheertham Gayathri (2011), Mental Health of Postgraduate Orthodontic Students in India: Multi-institution survey, *Journal of Dental Education*, Vol. 76 No.2
- [20] Zulueta, FM and Costales, Jr. NEB (2003), *Methods of Research: Thesis-Writing and Applied Statistics*, Navotas, Metro Manila, Philippines: Navotas Press, ch 5, pp.75-76
- [21] Garbee WH, Zucker SB & Selby GR (1980), Perceived sources of stress, *Journal of American Dental Association*, 1980 June; 100(6):853-7
- [22] Polychronopoulou A, Divaris K.(2009), Dental students' perceived sources of stress: a multi-country study. *J Dent Educ* 2009;73(3):328-37
- [23] Newbury-Birch D, Lowry RJ, Kamali F,(2002), The changing pattern of drinking, illicit drug use, stress, anxiety and depression in dental students in UK dental school: a longitudinal study. *Br Dent J*;192:646-649.



- [24] Underwood B, Fox K. (2000) A survey of alcohol and drug use among UK based dental graduates. *Br Dent J*; 189: 314-317
- [25] Harikiran AG, Srinaqesh J, Naqesh KS, Sajudeen N,(2012), Perceived sources of stress among final year undergraduate students in a dental teaching institution at Bangalore India: A cross sectional study, *Indian J Dental Research* 2012; 23:331-6
- [26] Naidu RS, Adams JS, Simeon D, Persad S., (2002). Sources of Stress and psychological disturbances among dental students in the West Indies, *J Dent Educ* 2002; 66(9): 1021-30
- [27] Muirhead V, Locker D,(2007), Canadian dental students' perceptions of stress. *J Can Dent Educ Ass* 2007; 73(4):323
- [28] Humphris G, Blinkhorn A, Freeman R, Gorter R, Hoad-Reddick G, Murtomaa H, et. al. (2002) Psychological stress in undergraduate dental students: baseline results from seven European dental schools. *Eur J Dent* 6(1):22-9