

# Stressful University Life and its Impact on the Students' Lifestyle; A Survey-based Study in Riyadh City

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**Introduction:** Dental education is already stressful including the course of training it entails and stressful condition causing irregular diets, thereby leading to obesity. These ever-increasing stress levels on dental students lead to a frightening amount of stress-associated anxiety, depression, substance abuse, and in some cases suicide. **Materials and Methods:** This is a cross-sectional study conducted among dental students in Riyadh using an online survey. All dental universities in Riyadh were contacted and students from clinical levels will be requested to fill up the survey. **Results:** A total of 388 respondents filled the survey and it was noted that 76.3% were males and 23.7% females. On the basis of dentistry year, 21% were from 4th year, 35.9% from 5th year, and 43.1% from 6th year. 10.8% had GPA less than 2.5, 44.6% had 2.5-4.0 and 44.6% had a GPA of more than 4.0. **Conclusion:** Accommodation was the least stressful of all factors discussed in the study. Clinical factor was revealed to be the most stressful among dental students.

**Keywords:** Dental students, Stress, Lifestyle.

## INTRODUCTION

Stress is part of our daily lives, and one feels stressed out on several occasions, which is a chemical reaction to any pressure placed on any person's system. Stress only becomes a problem in face of overwhelming challenges. When there are prolonged intervals of stress, it can lead to harmful changes such as depression, heart disease, back pain, headaches, raised blood pressure, indigestion, etc. Students who pursue dentistry generally face increasing amounts of stress in their studies with prevailing pressure of the profession as a whole resulting in declining academic performance. It is pertinent to note that based on the nature of professions, the mental health of dentists is not only of concern to them but also to society as a whole (Saini et al, 2010; Kumaret al, 2009).

The increasing levels of stress not only worsen the quality of life but also affect patient care and its overall psychodynamics. These ever-increasing stress levels on dental students lead to a frightening amount of stress-associated anxiety, depression, substance abuse, and in some cases suicide. Chronic stress also negatively impacts memory and learning, especially complex problem-solving capabilities. It also adversely impacts the personal lives of many, where it can result in damaged personal relationships or even the end

of it (Ray & Joseph, 2010; Clark & Rieker, 1986). Dental education is already stressful including the course of training it entails and stressful conditions that lead to irregular diets, resulting obesity. Also, there is strong evidence that semen quality is impaired by psychological stress which may lead to couple infertility. Such impacts on public health and the future of the society should make stress management one of the top priorities for the government on its health agenda (Ilacqua et al, 2018; Gupta et al, 2009).

The developments in higher education that have placed increasing emphasis on practical performance which in turn establishes accountability for the students during studies have raised fears regarding the increasing levels of stress. It is pertinent to note that such a stress will not only affect the academic productivity of the student but also affect the institutional commitment and their performance as well (Horta et al, 2019).

Several studies in this field have revealed that students who suffer from chronic stress and anxieties may have serious adverse impacts on their work, health, life, and overall well-being. Such studies signify that a moderate level of stress is good for performance as it has been shown that people with

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such features have better motivation and performance than those with high and low levels of stress (Sharma, 2018).

Another study in the same field reveals that the students' major risk factor for suicide was stress and hopelessness. Also, the minor risks were also indirectly linked to perceived stress levels such as their preference to happiness and handling techniques including but not limited to self-distraction, self-blame, and substance use (Lew et al, 2019).

In some of the studies, statistical analysis signifies that the engagement at work (which is essential for progress and a sense of belonging) is inversely proportional to the burnout and perceived stress of the people. Work engagement is also negatively correlated with feelings of dropping out and probing the choice to enter medical college in the first place. Work engagement is a very useful metric in order to assess dental students' overall well-being and pinpoint areas for interference (Agarwal et al, 2019).

## STUDY HYPOTHESES

University-related stress has a negative impact on dental students' lifestyles.

## AIMS OF THE STUDY

- To determine the prevalence of university-related stress among dental students.
- To compare the stress levels on the basis of dentistry year.
- To determine any correlation between GPA, distance to university, and dentistry year with lifestyle changes.

## MATERIALS AND METHODS

### Study Design

This is a cross-sectional study conducted among dental students in Riyadh using an online survey.

### Study Sample

All dental universities in Riyadh were contacted and students from clinical levels will be requested to fill up the survey. 388 students from all levels/years filled up the survey.

### Study Instrument

Online questionnaire was constructed which consisted of questions related to demographics, source of stress at university and its effect on the lifestyle of students.

### Instrument Validity and Reliability

A pilot study was conducted by letting the survey be filled by 20 participants and the data was inserted in SPSS version 22 to determine the reliability by using Chronbach's coefficient alpha (Value was .779). Validity of the questionnaire was tested by sending it to experienced researchers in REU and no changes were made.

### Statistical Analysis

Collected data was analyzed using SPSS version 22, where descriptive as well as inferential statistics was conducted. Mean values were calculated and Kruskal Wallis test was done

as the sample was not normally distributed. Spearman correlation was done to assess any correlation between lifestyle changes and demographic variables.

## Legend for Mean Values:

- 0 Not stressful
- 1 Slightly stressful
- 2 Fairly stressful
- 3 Very stressful
- 4 Highly stressful
- 5 Extremely stressful

## RESULTS

A total of 388 respondents filled the survey and it was noted that 76.3% were males and 23.7% females. On the basis of dentistry year, 21% were from 4<sup>th</sup> year, 35.9% from 5<sup>th</sup> year and, 43.1% from 6<sup>th</sup> year. 10.8% had GPA less than 2.5, 44.6% had 2.5-4.0 and 44.6% had a GPA of more than 4.0. Students from different universities took part in this study, with 63.3% from REU, 29.7% from KSU, 4.6% from Al-Farabi, and 0.5% from PNU. 81.5% of them loved their parents and 18.5% did not. 61.5% revealed that it took less than 30 minutes for them to reach their university, 36.9% took 30-60 minutes and 1.5% took more than 60 minutes.

## DISCUSSION

It is generally accepted that dental education programs are highly demanding and can be stressful for the students enrolled in it. This study was undertaken to assess the impact of stressful university life on the students' lifestyle in Riyadh Saudi Arabia. A total of 388 people participated in the survey to provide the needed insight. 81.5% of the students live with their parents, in another study, statistically significant differences were noted as the students who live with their parents score lower in psychological wellbeing (Uraz et al, 2013). And 61.5% take less than 30 minutes to travel to their universities. 44.6% of the students had a GPA of 4 or more.

When asked about the lifestyle of the students, 92.2% of the students had experienced a change in their lifestyles, 85.1% had changes in sleeping habits. 73.3% feel down or depressed and 80% of them consider themselves physically inactive. 86.1% of the students are concerned about their weight and 46.7% of them consume soft drinks and juices indicating a higher sugar intake.

The results were compared with the dentistry year of the students to see whether any significant differences exist with the factors that may contribute to stress levels of the students. As far as their accommodation is concerned, it was noted that statistically significant differences exist whereby the stress levels of 6<sup>th</sup>-year students was the highest when compared with the 5<sup>th</sup> and 4<sup>th</sup>-year students, who are living away from their homes (p-value: .007), who might be living in their homes or otherwise but think that their accommodation is not appropriate (p-value: .048), and think that they have inadequate time for relaxation (p-value: .006). In a study, it was concluded that final year students reported the greatest amount of stress associated with living accommodation and personal factors and relaxation time (Uraz et al, 2013).

With regards to educational environment, statistically significant differences were found whereby the stress levels of 6<sup>th</sup>-year students was the highest when compared with the 4<sup>th</sup> and 3<sup>rd</sup>-year students, who receive criticism from their instructors (p-value: .014),

**Table 1: Demographics of the study participants**

Variables	Frequencies
Gender	Males: n=296 (76.3%) Females: n=92 (23.7%)
Dentistry year	4 <sup>th</sup> year: n=82 (21%) 5 <sup>th</sup> year: n=140 (35.9%) 6 <sup>th</sup> year: n=168 (43.1%)
GPA	Less than 2.5: n=42 (10.8%) 2.5-4.0: n=174 (44.6%) More than 4.0: n=174 (44.6%)
Age	Mean: 23.77 (SD: 1.56)
University	REU: N=248 (63.3%) KSU: N=116 (29.7%) Al-Farabi: n=18 (4.6%) PNU: n=2 (0.5%)
Live with parents	Yes: n=318 (81.5%) No: n=72 (18.5%)
Travel time to university	Less than 30 min: n=240 (61.5%) 30-60 min: n=144 (36.9%) More than 60 min: n=6 (1.5%)

**Table 2: Students' mean scores compared by dentistry years**

Questions	4 <sup>th</sup> year	5 <sup>th</sup> year	6 <sup>th</sup> year	Total Mean (SD)	P-value
<b><u>Accommodation:</u></b>					
Living away from home	1.36	1.91	2.16	1.90 (1.52)	.007*
Accommodation not appropriate for studying	1.68	2.22	2.39	2.18 (1.49)	.048*
Inadequate time for relaxation	3.12	2.98	3.51	3.24 (1.44)	.006*
Reduced Holidays	3.35	3.10	3.16	3.18 (1.32)	.335
Personal health (Chronic disease)	2.09	2.34	2.54	2.37 (1.60)	.072
<b><u>Educational Environment:</u></b>					
Compliance of patients with appointments	3.07	3.28	3.50	3.33 (1.38)	.062
Receiving criticism from instructors	2.58	3.05	3.13	2.98 (1.23)	.014*
Rules and regulation at college	2.97	3.07	2.81	2.94 (1.26)	.195
Discrimination among students	2.78	3.01	2.91	2.92 (1.34)	.368
<b><u>Academic Work:</u></b>					
Teaching and communication language at work	2.78	2.98	2.21	2.61 (1.38)	.000*
New curriculum topics	2.90	3.21	2.32	2.76 (1.38)	.000*
Competition for grades	3.02	3.45	3.27	3.28 (1.26)	.117
Examinations	3.46	3.40	3.30	3.37 (1.29)	.367
Self confidence	2.56	2.82	2.89	2.80 (1.46)	.176
<b><u>Clinical Factors:</u></b>					
Adequacy of clinical supervision	2.82	2.84	2.95	2.88 (1.32)	.717
Completion of clinical requirements	3.73	3.65	4.10	3.86 (1.24)	.001*
Insufficient treatment time	3.26	3.32	3.36	3.33 (1.13)	.864
Transition from preclinical to clinical	2.92	2.97	2.89	2.92 (1.35)	.979
Difficulty in learning manual skills	3.17	3.24	2.91	3.08 (1.16)	.149
Managing difficult patients	3.21	3.50	3.40	3.40 (1.18)	.389
Communication with patients	2.97	3.10	2.75	2.92 (1.43)	.245

**Table 3: Lifestyle-related questions with their responses**

Lifestyle-related questions	Responses
Experiences any changes in eating habits lately?	Yes: 92.2% No: 7.8%
Changes in sleeping habits lately?	Yes: 85.1% No: 14.9%
Have you been feeling down or depressed lately?	Yes: 73.3% No: 26.7%
Are you physically inactive?	Yes: 80% No: 20%
Are you concerned about your current weight?	Yes: 86.1% No: 13.9%
Do you regularly consume soft drinks and juices?	Yes: 46.7% No: 53.3%

**Table 4: Correlations between dentistry year, GPA, and travel time to university with perceived lifestyle changes**

Lifestyle-related questions	Dentistry year	GPA	Travel time to University
Experienced any changes in eating habits lately?	$\rho = -.006$ $p = .912$	$\rho = -.009$ $p = .863$	$\rho = .046$ $p = .372$
Changes in sleeping habits lately?	$\rho = -.009$ $p = .867$	$\rho = -.154$ $p = .002^*$	$\rho = -.153$ $p = .002^*$
Have you been feeling down or depressed lately?	$\rho = -.089$ $p = .080$	$\rho = -.425$ $p = .000^*$	$\rho = -.146$ $p = .004^*$
Are you physically inactive?	$\rho = -.004$ $p = .932$	$\rho = -.117$ $p = .021^*$	$\rho = -.152$ $p = .003^*$
Are you concerned about your current weight?	$\rho = -.024$ $p = .634$	$\rho = -.008$ $p = .880$	$\rho = -.049$ $p = .332$
Do you regularly consume soft drinks and juices?	$\rho = -.042$ $p = .405$	$\rho = .276$ $p = .000^*$	$\rho = -.074$ $p = .142$

$\rho$ : Spearman's correlation

$p$ : Significance

These results are in line with another study where it was determined that faculty members' negative behavior vastly affect final year students (Uraz et al, 2013).

The results showed that the stress levels increase over the period a student spends in dentistry. Pressure to perform, faculty and administration, workload, and students' perceptions of their self-efficacy were the most stress-provoking factors. Also, psychological well-being and overall health were significantly associated with the year of study (Uraz et al, 2013).

With regards to academic work, statistically significant differences were found whereby the stress levels of 5<sup>th</sup>-year students was the highest when compared with the 6<sup>th</sup> and 3<sup>rd</sup>-year students, where they face new curriculum topics (p-value: .000) and they face issues of language and communication at work (p-value: .000). These results show that stress due to academic factors and performance pressure is lesser in the earlier years but greatly increases in the final years of dentistry.

As far as clinical factors are concerned, statistically significant differences were found whereby the stress levels of 6<sup>th</sup>-year students were significant when compared with the 4<sup>th</sup> and 3<sup>rd</sup>-year students, when it comes to completion of clinical requirement (p-value: .001).

When compared with another study, it showed that the examinations and completing clinical requirements are the highest sources of stress among dental students (Alzahem, Van der Molen & De Boer, 2013; Al-Sowygh et al, 2013). Therefore, introducing clinics gradually from the first year onwards might help reduce the overall stress levels of the students who are handed over new curriculum and clinical requirements in the final years of education.

Also, the correlation between different stressors was checked and it was found that statistically significant differences exist where those students who reported to have changes in their sleeping habits (p-value: .002), a negative correlation of -.154 exist with their GPA. It means that the students with lower GPA feel more stress he/she is in and the changes of sleeping habit is an indication of the stress levels. Statistically significant differences exist where those students who reported feeling down or depressed (p-value: .000), a high negative correlation of -.425 exist with their GPA. It means that the lower the GPA of a student the more stress he/she is in and the feeling of depression or feeling down is an indication of the stress levels.

Further, statistically significant differences exist among those students who reported to be physically inactive (p-value: .021), a negative correlation of -.117 exist with their GPA. It means that the lower the GPA of a student the more stress he/she is in and the lack of physical activity is an indication of the stress levels. It suggests that if the level of stress increases a performing student may also suffer in his/her academic performance as well. In another study, it was seen that experiencing higher levels of stress was found to be significantly associated with lower grades (Crego et al, 2016)

## CONCLUSIONS

- Accommodation was the least stressful of all factors discussed in the study.
- Educational environment was the second least stressful factor reported by the students.
- Academic work was the second-highest stressful factor.
- Clinical factor was revealed to be the most stressful among dental students.

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- Overall, 6<sup>th</sup>-year students faced more stress as compared to lower-level students.
- High GPA students showed less lifestyle changes.

## CONFLICT OF INTEREST

There was no conflict of interest among the authors.