



Psychological Well Being Status Of Dental Undergraduate Students Versus Intern Students And Graduates

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Abstract

Background: The psychological anxiety and depression among dental students is a well-established fact. The aim of this study was to compare the psychological well-being of dental undergraduate students with their intern and graduate counterparts.

Methodology: A cross-sectional study was carried out involving dental undergraduate students, interns and graduates. A total of 68 subjects participated in the study. Group 1 comprised of undergraduate students and Group 2 comprised of interns and graduate house surgeons. All the subjects were administered World Health Organisation-5 (WHO-5) Well-being Index and their status was evaluated and compared.

Results: Out of the eligible subjects, both Groups had 32 subjects each. Two sample independent t-test showed a significant difference in mean WHO-5 Index scores of two groups (Mean difference 2.12). Group 1 had a lower mean WHO-5 index score than Group 2. (p-value = 0.04)

Conclusion: The present study's findings reveal a depreciated picture of psychological well-being status of dental undergraduate students in comparison to dental interns and graduates.

Keywords: Psychological well-being, WHO-5 index, Dental Undergraduate students, Interns, Graduates

Introduction:

The stress and mellow among dental students are no hidden phenomenon as depicted by quite a few systematic reviews. Dental students face many stressors, including frequent exams, clinical cases needed to be finished each year, time constraints, anxious patients, and possible conflicts with colleagues ^{1,2}. The transition to clinical practice, and the necessity to acquire adequate clinical competencies and interpersonal skills, of great importance when dealing with a patient, being the most significant sources of stress from the student's perspective ³. In addition to the depreciation in productivity, this psychological distress results in deterioration of systemic health and poor academic outcome. ^{4,5}

The prevalence rates of such distress have varied along a multitude of studies depending on socioeconomic conditions and demographics. Depression ranged from 2.8 to 41%, anxiety ranged from 47 to 67%, and stress ranged from 70 to 72% ^{6,7}

Presumably, the academic stress builds throughout the academic year and in preclinical dental students is probably intensely linked to the frequent examinations ⁸. While saltating from undergraduate evaluation phase to non-evaluatory intern phase, the levels of distress are expected to ebb down.

The aim of this study was to analyze and compare the psychological well-being of undergraduate dental students with dental interns and graduates.

Materials and Methods:

A prospective cross-sectional study design was prepared and implemented on dental students, interns and dental graduates of Government Dental College Srinagar, J & K. The educational process in this institute comprises 5 years of study, with 4 years of academic examination phase followed by 1-year compulsory internship period without any further academic evaluation.

A total of 68 subjects participated in the study. Group 1 comprised of undergraduate students and Group 2 comprised of interns and graduate house surgeons. All the subjects were administered WHO-5 Well-being Index and their status was evaluated and compared. WHO-Five Well-Being Index (WHO-5) is an instrument developed at the Psychiatric Research Unit, Mental Health Centre North Zealand, Hillerod, Denmark, a World Health Organization Collaborating Centre. It measures self-reported positive psychological well-being. WHO-5 consists of a 5-item questionnaire, positively worded, with a time frame of evaluation consisting of the previous two weeks. Its interpretation is in accordance with the score obtained, which ranges from 0 to 100; the higher the score means better the well-being.

Before entering the present study, the subjects were informed about the study design and the voluntariness of participation. The Ethics Committee of Hospital approved the study design.

Data of positive well-being was collected by utilizing an online questionnaire that included WHO-5.⁹ Subjects were asked to submit their responses utilizing Google forms portal. Incomplete responses or those who refrained from providing the consent were excluded from the study design.

Statistical Analysis:

SPSS Statistics software was used for data analysis. Two sample independent t-test was applied. A p value less than 0.05 was considered significant.

Results:

Out of 105 invited students, 68 participated in the study (response rate = 64%). Four subjects who submitted the response but refrained from providing informed consent were excluded from analysis. Out of the remaining 64 subjects, 32 each belonged to Group 1 and Group 2. (Table 1). Out of 32 subjects in Group 1, 13 were 2nd year students (subgroup 1a), 3 were from 3rd year (sub group 1b) and 16 were final year students (sub group1c). Group 2 had 14 interns (sub group 2a) and 18 house surgeons (sub group2b). (Figure 1)

To compare the differences in the tested scales between Group 1 and Group 2, two sample independent t-test was conducted. Group 1 had mean WHO-5 well-being Index score of 48 while as the mean for Group 2 was 50.12. The results showed that there were statistically significant differences in mean WHO-5 psychological well-being scores of the two groups with a mean difference of 2.12 (Table 2).

Among sub groups of Group 1, 3rd year students presented with highest mean WHO-5 well-being score followed by 2nd year students while final year students had the least mean WHO-5 score. (Table 3a) Of the two subgroups of Group 2, interns had better mean WHO-5 well being score than house surgeons. (Table 3b)

Table 1

Group	Number of Subjects (N)	Percentage (%)
1 (Undergraduate Students)	32	50
2 (Interns and Graduates)	32	50

Table 2

Group	Sample size	Mean	SD	MD	p-value
1	32	48	18.51	2.12	0.040*
2	32	50.12	26.95		

SD: standard deviation, MD: Mean Difference, *statistically significant

Figure 1

68 responses

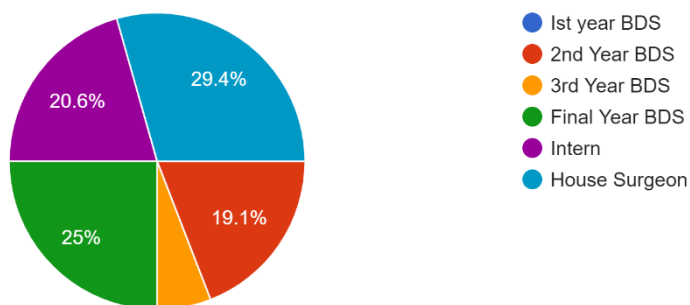


Table 3a: Mean WHO-5 score

Sub Group 1a	52
Sub Group 1b	72
Sub Group 1c	41.84

Table 3b: Mean WHO-5 score

Sub Group 2a	48.70
Sub Group 2b	47.71

Discussion:

Dental students follow a curriculum schedule that essentially involves two broad phases. First phase of 4 years of academic assessment followed by 1 year of compulsory rotatory assessment-free internship phase. Academic assessment that includes a multitude of theoretical and practical examinations is expected to be a period of stress that could impact the psychological well being of students. Unlike this, assessment free internship phase should comparatively act as a stress breaker compliment to most of the students coming through the first phase. This study was done to elucidate and compare the change in psychological well-being status of dental students while passing through undergraduate assessment stage to internship stage.

In a study by Proteasea *et al* (2016), who monitored the psychological well-being of dental students over the first semester of the academic year using WHO-5 index, the students' psychological well-being was found to be highest at the beginning of the semester and lowest at semester evaluation period.¹⁰ Atalayin *et al* (2015) investigated the prevalence of burnout among a group of Turkish preclinical dental students, to compare the level of burnout and to determine the consequences in structural equation model. Out of a total of 329 subjects, 2.3% of students had high level of emotional exhaustion and 16.7% of students had high level of cynicism. Academic workload played an important role in the development of burnout.¹¹ The evaluatory outcome of the present study corroborates the above findings as undergraduate students who go through evaluation phase depicted lesser positive well being status as compared to the interns who faced no academic evaluation.

Naidu *et al* (2002), investigated sources of stress and psychological disturbance in dental students across the five years of undergraduate study at a dental school in Trinidad using Dental Environment Stress questionnaire (DES) and the Brief Symptom Inventory (BSI). They observed that levels of stress increase over the five years with a noticeable spike at

the transition between the preclinical and clinical phases. Significant differences were found between specific stressors across the five years of study.¹² Tangade *et al* (2011) investigated perceived sources of stress on dental students and the role of parents in their career choice decisions. A modified dental environmental stress questionnaire was administered to 304 undergraduate dental students. The final year students presented with higher stress scores. This is consistent with the observations of the present study where the positive well being of final year clinical students (Subgroup 1c) deteriorated significantly as compared to 2nd year pre-clinical students (Subgroup (2011a).

Singh *et al* (2012) did a study on 35 medical students and assessed mood parameters using Depression Anxiety Stress Scale (DASS) scoring, and salivary cortisol levels using quantitative ELISA. The levels of mood parameters and salivary cortisol were significantly raised during examination stress, suggesting that examinations act as unavoidable stressors¹³. In the present study, final year students who were already scheduled for facing end term academic assessment showed the least WHO-5 well being score thus being at the ebb of their psychological well-being.

The limitations of this study include small sample size, subjects belonging to single dental college, no separate evaluation for males and females. Furthermore, first year dental students couldn't participate as they had recently qualified and were yet to join the formal classes. In spite of the limitations, this study gives an insight into the very abstract psychological status of dental students that may potentially help in designing and implementing special life coaching programs for dental students aiming at stress relaxation.

Conclusion:

The present study's findings reveal a depreciated picture of psychological well-being status of dental undergraduate students in comparison to dental interns and graduates.

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