

Depression, anxiety and stress in a cohort of Australian dentistry students



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Background:

Dentistry students during their studies are faced with challenging academic and clinical curriculum and these stressors can result in depression, anxiety, burnout and absenteeism. This study aimed to describe preliminary findings of the perceived levels of depression, anxiety and stress in a cohort of Australian undergraduate dentistry students.

Methods:

Students enrolled in Years 1 to 4 of the Bachelor of Dental Science (Honours) program at The University of Queensland were invited to complete an online survey which included demographics and the Depression, Anxiety and Stress Scale (DASS-21). Data analysis was mostly descriptive, t-tests and univariate statistics compared groups.

Table 1. Proportions of preclinical and clinical dentistry students scoring within the DASS severity ratings* (n= 176)

		Normal	Mild	Moderate	Severe to extremely severe
		n (%)	n (%)	n (%)	n (%)
Depression	Preclinical	64 (55.7)	22 (19.1)	17 (14.8)	12 (10.4)
	Clinical	33 (54.1)	15 (24.6)	10 (16.4)	3 (4.9)
	Total	97 (55.1)	37 (21.0)	27 (15.3)	15 (8.5)
Anxiety	Preclinical	55 (47.4)	10 (8.6)	31 (26.7)	20 (17.2)
	Clinical	30 (49.2)	4 (6.6)	18 (29.5)	9 (14.8)
	Total	85 (48.0)	14 (7.9)	49 (27.7)	29 (16.4)
Stress	Preclinical	93 (81.6)	8 (7.0)	7 (6.1)	6 (5.3)
	Clinical	43 (68.3)	13 (20.6)	4 (6.3)	3 (4.8)
	Total	136 (76.8)	21 (11.9)	11 (6.2)	9 (5.1)

*Severity ranking scores DASS-21: Depression: normal=0-9, mild=10-13, moderate=14-20, severe=21-27, extremely severe ≥28. Anxiety: normal=0-7, mild=8-9, moderate=10-14, severe=15-19, extremely severe ≥20. Stress: normal=0-14, mild=15-18, moderate=19-25, severe=26-33, extremely severe ≥34.

Table 2. Average severity levels of depression, anxiety and stress in this cohort of dentistry students (n= 176) compared to other published studies using the DASS-21

	Sample size	Comparator study	Country	Severity level		
				Depression	Anxiety	Stress
Present study	176	Dentistry students	Australia	Normal	Mild	Normal
Lovibond and Lovibond, 1995	2914	Population norm	Australia	Normal	Normal	Normal
Crawford and Henry, 2003	1771	Population norm	United Kingdom	Normal	Normal	Normal
Lovibond and Lovibond, 1995	717	University students	Australia	Normal	Normal	Normal
McKenzie and Schweitzer, 2001	197	Science and IT students	Australia	Normal	Normal	Normal
Bayram and Bilgel, 2008	1617	University students	Turkey	Mild	Mild	Mild
Wong et al., 2006	7915	University students	Hong Kong	Normal	Mild	Normal

Results:

Participants (n= 192; females= 57%) overall mean DASS scores were in the normal to mild range. Mean depression 4.69 (SD 3.87), anxiety 4.25 (SD 3.21) and stress 5.50 (SD 3.65) scores were normal for the majority of students. Clinical students (year three and four) had lower proportions of normal stress scores compared to preclinical students (years one and two) (Table 1). Dentistry students' mean anxiety scores were higher than in the general population but similar to other university students (Table 2).

Conclusions:

In this cohort of dentistry students a fair proportion have moderate or above levels for depression, anxiety and stress, indicating they may require professional assistance. Compared to population norms, they had normal levels of depression and stress but higher levels of anxiety. Teaching and learning in dentistry shifts from primarily lecturing and tutoring modalities in preclinical years (Year 1 and 2), to the addition of clinical teachers in a clinical patient-based setting in clinical years (Year 3 and 4). Clinical based examination and working hours increase in the clinical years and may influence the student's perceptions of their learning environment and levels of depression, anxiety and stress. Currently underway, a longitudinal study investigating dentistry students' well-being will help inform selection of students, curriculum modifications to enhance the learning environment, and the timing of interventions to help ensure students are supported through this challenging degree.