

The well-being of oral health students: a transnational investigation

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Background

The oral health profession is often perceived publicly as stressed, depressed and prone to suicide. Oral health students during their training are faced with a large theoretical workload, while simultaneously learning fine motor laboratory and patient centred clinical skills. The transactional stress theory describes stress as neither the result of the individual or the environment, but the relationship between them. Currently, very little is known about the personality of oral health students and how they might cope in their university environments. This study aims to investigate the wellbeing of oral health students in Australia and New Zealand.

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Methods

Participants enrolled in a Bachelor of Oral Health program in Australia and New Zealand were invited to partake in this study. Students of ten universities during semester 2 2019, were invited to complete an online questionnaire including demographics, the Temperament and Character Inventory (TCI), The Depression, Anxiety and Stress scale (DASS) and The Dundee Ready Education Environment Measure (DREEM).

Descriptive statistics were used to summarise measures. The mean and 95% confidence interval of the mean for depression, anxiety and stress scores were used to assess the association between variables of interest.

Results

Three hundred and thirty-six students participated in this study. Majority of oral health students were between 23.7 years old (SD 5.2), female (n= 301, 89.6%), born in Australia (n= 162, 48.2%), single (n= 249, 74.1%), living with family (n= 150, 44.6%) and from an urban background (n= 264, 78.6%). There was an approximately even participation across the three year levels (37.2%, 36.0%, 26.8% respectively).

Personality

Three profiles of personality traits were identified (Figure 1). Profile one is characterised by average levels of most traits, and very low self-directedness. Profile two is low in novelty seeking and highest in harm avoidance. Profile three is lowest in harm avoidance and highest in persistence, self-directedness and cooperativeness.

Learning environment

Students overall perceptions of the academic environment was more positive than negative (Table 1).

Well-being

More than a third of participants had moderate or higher scores for depression, anxiety and stress (Table 2). The personality profile three had significantly lower mean depression, anxiety and stress score. Similarly students with excellent environment perceptions had lower mean DASS scores (Table 3).

Figure 1. Temperament and Character trait scores for student personality groups (n= 242)

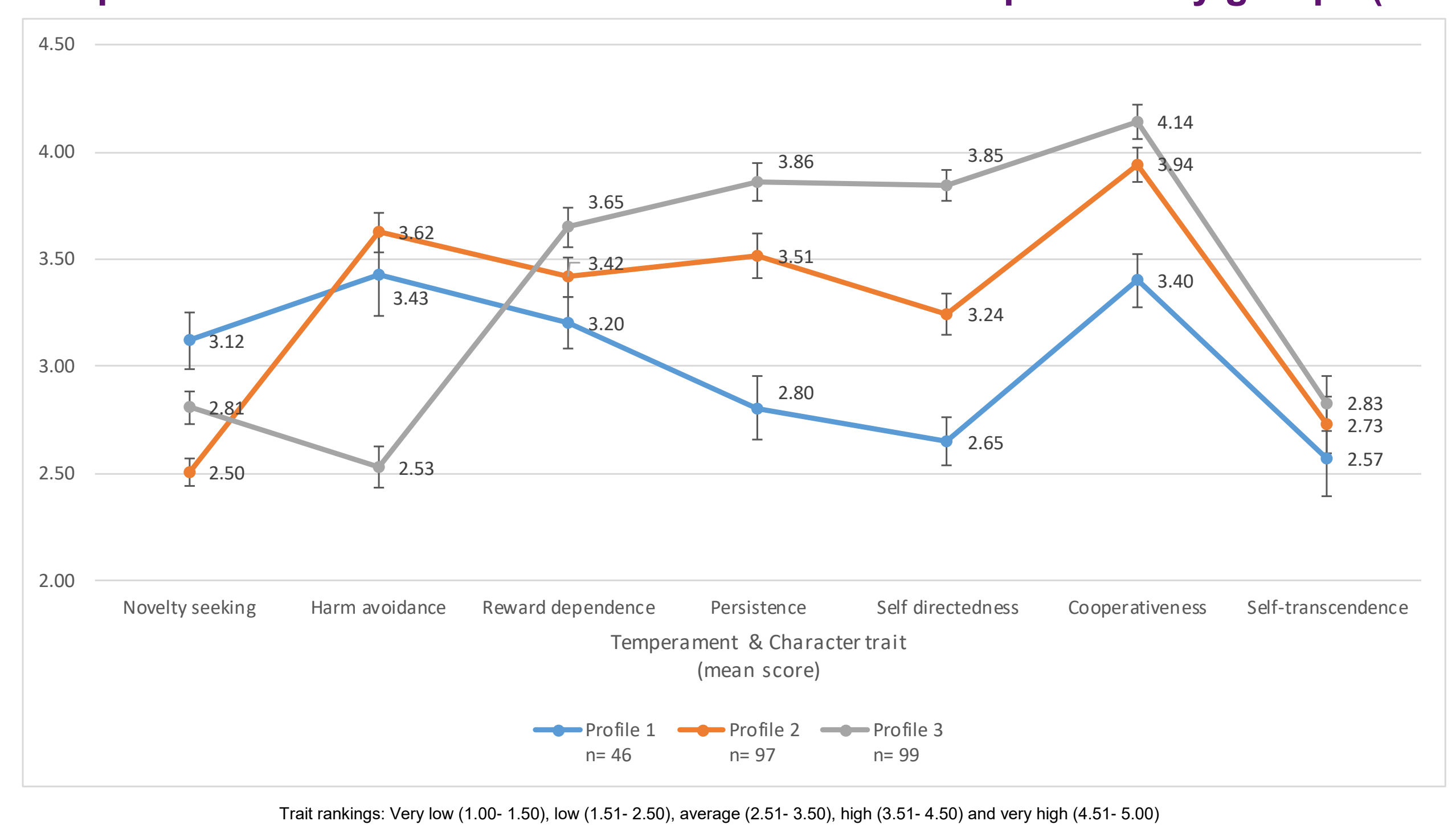


Table 1. Average Dundee Ready Education Environment Measure scores (n= 311)

	Maximum score	Mean (SD)
DREEM total score	200	140.9 (20.4)
Students' Perceptions of Learning	48	35.1 (5.8)
Students Perceptions' of Teachers	44	30.9 (5.4)
Students' Academic Self-Perceptions	32	22.6 (4.1)
Students' Perceptions of the Educational Atmosphere	48	33.3 (6.5)
Students' Social Self-Perception	28	18.6 (3.4)

DREEM total and domain cut off scores: 0-25% very poor, 25.1-50% plenty of problems, 50.1-75% more positive than negative, 75.1-100% excellent

Table 2. Proportions of oral health students scoring within DASS severity ratings* (n= 329)

	Normal n (%)	Mild n (%)	Moderate n (%)	Severe to extremely severe n (%)
Depression	195 (60.4)	54 (16.7)	46 (14.2)	28 (8.6)
Anxiety	142 (43.2)	32 (9.7)	89 (27.1)	66 (20.1)
Stress	222 (68.1)	43 (13.2)	39 (12.0)	28 (8.6)

*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 3. Associations between depression, anxiety and stress and students personality and perceptions of environment (n= 223)

		Depression Mean (95% CI)	Anxiety Mean (95% CI)	Stress Mean (95% CI)
TCI personality profile	One	7.7 (6.4 - 9.1) ^a	6.5 (5.2 - 7.8) ^a	8.4 (7.3 - 9.5) ^a
	Two	5.6 (4.8 - 6.4) ^b	6.2 (5.5 - 7.0) ^b	7.6 (6.9 - 8.4) ^b
	Three	2.2 (1.7 - 2.6) ^{a,b}	2.9 (2.4 - 3.4) ^{a,b}	4.6 (4.0 - 5.3) ^{a,b}
DREEM total score	Plenty of problems	11.0 (7.0 - 15.0) ^a	9.9 (6.1 - 13.7) ^a	11.3 (8.0 - 14.5) ^a
	More positive than negative	4.9 (4.4 - 5.5) ^a	5.1 (4.6 - 5.6) ^a	6.7 (6.2 - 7.2) ^a
	Excellent	2.3 (1.8 - 2.8) ^a	3.2 (2.6 - 3.8) ^a	4.8 (4.1 - 5.4) ^a

a-b) Non-overlapping confidence intervals were considered significantly different.

Conclusions

This research investigated the well-being of Australian and New Zealand oral health students. This cohort of students differed to other health professional students including dentistry and medicine reported in the literature. More than a third of oral health students had moderate or worse scores of depression, anxiety and stress, indicating a possible need for support and intervention. Students with a personality characterised by higher harm avoidance were associated with depression, anxiety and stress scores. This research is important to maximise the potential of the educational environment for students in all health professions for the benefit of student learning and wellbeing, as well as to create resilient and work ready graduates.