

Work, Stress and Play: Students' perceptions of factors impacting on their studies and well-being

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Abstract

Introduction: This study gathered information about life outside of the course for undergraduates studying at the School of Dentistry, Cardiff University. The aim was to explore how these external factors to the course may affect an individual's academic performance and well-being.

Materials and Methods: A cross-sectional study design was used. An online questionnaire designed for the purpose of the study was used to capture (quantitative and qualitative) data. Questions with dichotomous options, a range of statements with Likert scales (level of agreement) and open (free-text) questions were used. Data were analysed in SPSS using simple descriptive statistics and frequency distributions. Spearman's Rho was used to explore relationships for scaled categorical data. Content analysis was used for qualitative data.

Results: Two thirds (n=69, 63%) of participants reported being very stressed about their studies in the previous 12 months. The majority felt that external factors to their course (e.g. lack of sleep, health issues, financial concerns, hobbies and issues with friends) had impacted on their academic lives with only 9% (n=10) stating that their lives outside dentistry had no effect.

Discussion: Those who felt able to pursue hobbies and activities reported a better work life balance and less stress. Questions about pursuing hobbies and sleep may help identify students at risk of being stressed or who may benefit from additional support in order to achieve a better work-life balance.

Conclusion: This study has highlighted key areas for further investigation and opportunities for improving support to reduce student stress and improve well-being.

Introduction

While an exciting experience for many students, studying at a university can be a challenging time with increasing reports of stress amongst those enrolled in clinical courses. (1,2)

Learners come from a wide range of backgrounds and external circumstances can both enhance and impair undergraduates' engagement with their studies. External factors that stem from reforms in the higher education sector, for example, the introduction of tuition fees and the abolition of student grants in favour of loans have resulted in student lives becoming more pressurised. (3,4) In contrast, engagement with extra-curricular activities, for example, music can reduce stress and can improve work-life balance. (5,6)

External events, personal circumstances, and 'what matters' to an individual in their lives outside their place of study can vary. To achieve their full academic potential, undergraduates must balance these factors with the demands of their course. Failure to achieve this balance can have implications for student well-being and engagement and progression through the course. (7)

Studying for a qualification in a healthcare subject is perceived as being particularly stressful, though there is conflicting evidence that it differs with respect to other higher education qualifications. (8) Various factors have been suggested as being important in student progression through an undergraduate dental degree, although studies have produced conflicting results. A systematic review by Alzahem et al. in 2011 that examined various aspects of dental undergraduate stress from twenty different countries reported that major stressors differed globally.

Elani et al. (2014) in a systematic review of the literature and meta-analysis also demonstrated high levels of stress amongst dental students. Their findings concurred with

Humphris et al. (2002) who found psychological distress to affect a third of first year students across seven European dental schools. (10) While Elani et al. (2014) found academic factors to be a key contributor, a link between personal issues and stress was also evident. However, while there is objective evidence that dental students encounter difficulties throughout their time at university, many studies have been too broad demographically and have lacked specificity to draw meaningful parallels with programmes in the United Kingdom.

Evidence originating from the UK is limited, however, a recent study (11) that sought to identify dental students' perceived stress and barriers to effective study at one London dental school reported social distractions as the most highly rated barrier hindering study. It was unclear what those were, but it was suggested that some were related to the use of social media.

While it is generally accepted that a variety of external factors may impact negatively on the stress experienced by dental students (12,13), there is also some evidence to show the contrary i.e. that external factors, for example exercise can also help to protect students from stress and distress. (14) Furthermore, it has been proposed that experiencing some stress within a dental course can be beneficial by giving a sense of purpose and achievement.

(15,16) While aspects of the learning environment described by the authors were perceived as difficult and disappointing, students were motivated to learn from those challenging experiences.

There are few reports of stress management training for dental students or staff and most academic content focuses on the delivery of the academic programme and on the academic performance and clinical skills of their undergraduates. (13) Personal information is not shared without a clear reason to do so (17) and so staff can often know very little about the personal lives of their students, and how external factors might impact on their ability to

engage fully with their studies. The aim of this research was to gather baseline information about the lives of undergraduates studying for a dental degree at a single university dental school, and to explore factors outside the academic environment that may impact upon an individual's ability to reach their full potential.

Materials and Method

The study used a cross-sectional study design, collecting data with an online survey instrument. The School of Dentistry's Research Ethics Committee approved the study (Reference: 16/04a).

An online questionnaire was designed in conjunction with students and was used for data collection. The research instrument was developed by staff and students collaboratively and included a mix of original questions (developed for the purpose of the study and through a process of staff student review, deemed relevant to issues raised by students) and others that were informed by previous studies of stress which included personal life issues beyond the dental environment (Appendix). (12,18) The latter included wider questions about financial concerns, social/recreational perspectives, stress, and "personal life issues". In view of the potentially sensitive issues, participants were able to decline to answer any question. The questionnaire was piloted on a group of non-dental university students (N=5) to check for face validity and clarity. Some adjustments were made based on feedback from that process until the questionnaire was deemed acceptable by the students. The final format included twenty-seven items and included questions about: demographic data; outside interests and hobbies; academic satisfaction; finances; work-life balance and sources of support. A variety of question types were used, including open-ended, binary options, categorical and Likert-type scaled responses for agreement with statements.

All students registered on the BDS course at the School of Dentistry, Cardiff University during the spring semester of 2016 were invited to take part. Recruitment was via email, online notices and lecture announcements. The invitation remained active for a 12-week period. Participation was voluntary and anonymous. There were no exclusion criteria, and no incentives offered.

The online questionnaire was hosted by the Bristol Online Survey system and was accessed by following an online link from email and announcement notifications. Participant information was sent with invitation emails and participants indicated consent via a 'tick box'.

Data were exported from the Bristol Online Survey System into SPSS and Excel. Data from closed questions were analysed and simple descriptive statistics including frequency distributions created. Spearman's Rho tests were used to explore relationships for scaled categorical data.

Results

Participants

From a target population of 385 BDS students, 109 completed the questionnaire; a 28% response rate. Participants could opt out of any question but there was almost a 100% return for every question. The baseline characteristics of the cohort are shown in Table 1.

The age range of most respondents was 18-25 and nearly three quarters of respondents were female and the majority of respondents were studying dentistry as a first degree.

Motivation to study dentistry

When asked to indicate (up to three) reasons for choosing to study dentistry, participants commonly chose employment potential, career, salary potential and being right for their personality as justification for their choice (Table 2).

External issues and studying dentistry

One fifth of students (n=23, 21%) agreed or strongly agreed with the statement “External factors prevent me reaching academic grades I am capable of”, 55% (n=60) disagreed, and 23% (n=25) gave a neutral response to this question. Only ten students stated there were no factors that had a significant impact on their studies. Thirty-nine percent (n=42) reported one factor impacting on studies, 34% (n=37) reported two factors and the remaining 20 students reported between 3 and 5 factors. Details of factors that had affected them over the previous twelve months are shown in Figure 1. Half of all participants experienced difficulties sleeping and a quarter reported health concerns. Reasons that featured strongly included the stress of meeting course work deadlines, workload, assessments, and interactions with staff.

Stress and its impact

Two thirds (n=69, 63%) of participants agreed with the statement “I have been very stressed about my studies in the last 12 months”, 24% (n=27) gave a neutral response. Only 12% of students (n=13) disagreed with this statement. A third (n=33, 30%) of participants reported being constantly concerned about finances. There was a moderate significant relationship between constant financial worries stress $r(99) = .350, p < 0.001$ and a weak but significant relationship between financial concerns and the feeling that external factors had an influence on academic grades $r(98) = .265, p < 0.01$.

When asked to describe how external factors had affected their studies, students reported a range of physical and mental health impacts. Figure 2 shows that three quarters reported experiencing fatigue and over half reported a loss of motivation. Other common problems

included an inability to focus and forgetfulness, a drop in academic performance, emotional distress and feelings of isolation.

Work-Life Balance

Just over half of all participants agreed or strongly agreed with statements relating to having a good work life balance (n=57, 52%) and being able to pursue their hobbies (n=55, 50%).

Paid employment and studying

Only a small proportion of students (n=13, 11.2%) had regular paid employment during term time, with most working at weekends. However, three students were working between 17-25 hours per week, and one reported working over 25 hours per week. Students reported working to pay basic weekly bills.

Activities and hobbies outside of the dental course

The majority (n=92, 84%) of participants pursued hobbies and interests outside the course. Most often, extra-curricular pursuits were related to fitness, sports or dance (57%, n=52/92). Thirty-three per cent 33% (n=30/92) said they played a musical instrument, with many able to play more than one instrument. Just over half could play the piano and many played strings, brass, percussion and woodwind instruments. There was a strong positive relationship between being able to pursue hobbies and having a good work life balance $r(109) = .631$ $p < 0.001$. There was a strong inverse relationship between being able to pursue hobbies and stress experienced over a twelve-month period $r(109) = -.518$ $p < 0.001$. There was a weak but significant relationship between financial concerns and being unable to pursue outside interests $r(99) = -.225$ $p < 0.05$.

Discussion

This study provided valuable baseline information about the lives of dental undergraduates in a single dental school and factors outside the academic environment that may impact on students' ability to reach their full potential.

The overall response rate was 28%. The majority (83%) of respondents were in their second, third and fourth years of study. Students in the first and fifth year of the programme spend most of their time outside of the main dental school building. This makes it more difficult to engage with them. In contrast, those in years two to four spend most of their study time in the dental school. Over forty percent of students enrolled in those years completed the survey and it is possible that, with the volume of e-mail traffic and workload, students may not have opened invitation e-mails. Despite reassurances that individuals would not be identified, a proportion may have felt uncomfortable sharing their experiences via an online platform. Low response rates are not uncommon for surveys of dentists. In a review seventy-seven academic publications that had used a questionnaire sent to dentists, response rates varied 17% to 100%. (19) In a more recent online survey of recent dental graduates' knowledge of restorative dentistry training and service provision gathered just 100 responses from a potential pool of 4,000. (20) However, it is considered that low response rates do not necessarily indicate bias. (21) it is acknowledged there are some issues that that may not have been shared in this study and in view of the denominator and sample, it is possible that factors may be over or under represented in the findings. Furthermore, the study sample was from one dental school, potentially limiting the generalisability of the findings. Nevertheless, the range of issues reported are relevant to understanding the needs of students.

Students who responded to the survey were most often motivated to study dentistry because of good employment and career prospects. This is similar to the findings of other studies of dental students which also identified career prospects as a major reason for studying dentistry (22,23). Individual factors also appeared to be influential with just under half of all

respondents reporting that it suited their personality. It has been suggested that the drive and sense of passion for a career in dentistry can help to counter some of the stressful elements of dental studies (16) and may help to offset the effects of factors external to the course.

In contrast, wider social factors, reported in other studies appeared to be less influential in the decision to study dentistry (23) with very few students in our study reporting being influenced by community or family and friends.

A fifth of participants reported that external factors had adversely affected their grades, but the majority of students could identify one or more issues as having an impact on their learning. Half of all participants reported that lack of sleep had a significant impact on their ability to study. Poor sleep is well-recognised in student populations, (24) and may be related to stress, social experiences, alcohol and academic efforts. There is evidence to indicate that lack of sleep has a detrimental effect upon academic performance. (24,25) However, few participants in the present study associated a lack of sleep to poorer performance. Sleep deprivation has been linked with negative mood and decreased alertness. (26) This may be one of the reasons contributing to the high number of students reporting fatigue, forgetfulness, stress, and loss of motivation. This finding highlights the need to explore this area further with a view towards developing strategies to improve sleep hygiene.

A key finding was that two thirds of students reported being very stressed over the previous 12 months. The study was not designed to capture in depth measures of stress and did not use a psychological tool with multiple measures. However, the question used to capture this reflects those commonly used in epidemiological studies and results did provide an indication of students self-reported experience of stress. Stress is common amongst dental students (9) and it is accepted that this can trigger symptoms of mental illness including anxiety and depression, as well as somatic complaints, perpetuating feelings of stress. (27) Chronic

exposure to stressors can also have detrimental effects on the immune system (28) which may have contributed to the number of students reporting health issues in the present study.

Finance is commonly reported as a source of stress, so it is not surprising that a third of respondents said that they had constant financial worries, with 17% claiming that this had affected their ability to study. Previous studies have shown that economic disadvantage and the stress of student debt can have a negative effect on students and their performance.

(29,30) The extent of the financial strain on students was not measured in the present study, but 11% of students reported that they had found paid employment in order to pay everyday bills. A report by the British Dental Association in 2014 suggested that most dental students were in debt when they graduated; with the amount owed around £25,000 upon qualification (31). The dental course involves significant contact time with staff and a heavy academic workload over five years, leaving relatively little free time to 'rest or play' when compared to other non-clinical courses. Financial issues are therefore of concern, particularly for students from deprived backgrounds. (32) The present findings indicate that financial stressors may have the potential to hinder widening access for those from poorer backgrounds wishing to study dentistry at university.

Dentistry can be a stressful career and work-life balance is important. Strategies for coping with stress (33) and hobbies are linked to well-being. (34) More than half of respondents in the present study agreed that they had a good study-life balance and they could pursue their hobbies throughout the course. Being able to pursue hobbies was associated with reduced stress, and a better work life balance. Many participated in sporting activities and music which are considered helpful for coping with stress. (35) However, not all students were able to engage with leisure activities. Over 30% of students commented that they had been unable to pursue their outside interests and hobbies. It is unlikely that this was due to a lack of opportunity as Cardiff university offers an extensive range of external pursuits and protected

time when there is no timetabled teaching. There is insufficient data from this study to suggest whether feeling unable to pursue hobbies and interests is a manifestation of stress, or whether external pursuits add protection against stress. However, the findings do suggest that the ability to participate in external hobbies and activities may be an important indicator for well-being.

Strategies to encourage participation in hobbies and external activities and providing help for those who feel unable to pursue them may help to identify and support those who may be at risk from stress. The Quality Assurance Agency (QAA) has acknowledged the achievement of students beyond the curriculum and has produced a guidance document to help higher education providers fully recognise the activities that students undertake beyond their academic studies. (36) It is possible that formal recognition of activities could raise their profile leading to enhanced support for students. This is an area that could be explored in greater depth and could provide a network to enable students to engage with different friendship groups. This might be of benefit to those who feel isolated socially.

Conclusion

This study has generated a valuable insight into the influence of factors that are external to the course and 'what matters' to students. While acknowledging the area is complex, the research does provide a useful snapshot of the lives of dental students and their experiences. It has highlighted key areas such as stress and financial issues and has also identified new avenues that could be explored further to help identify and support those experiencing difficulties, for example, by asking students about being able to undertake hobbies and outside pursuits. Also, by working to ensure that students are supported to address sleep, financial and other issues whilst continuing to pursue their outside interests with safety nets in place to support those who feel unable to do so.

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Figures

Figure 1: Responses to the question “Which of the following have had a significant impact on your ability to study over the past 12 months?”

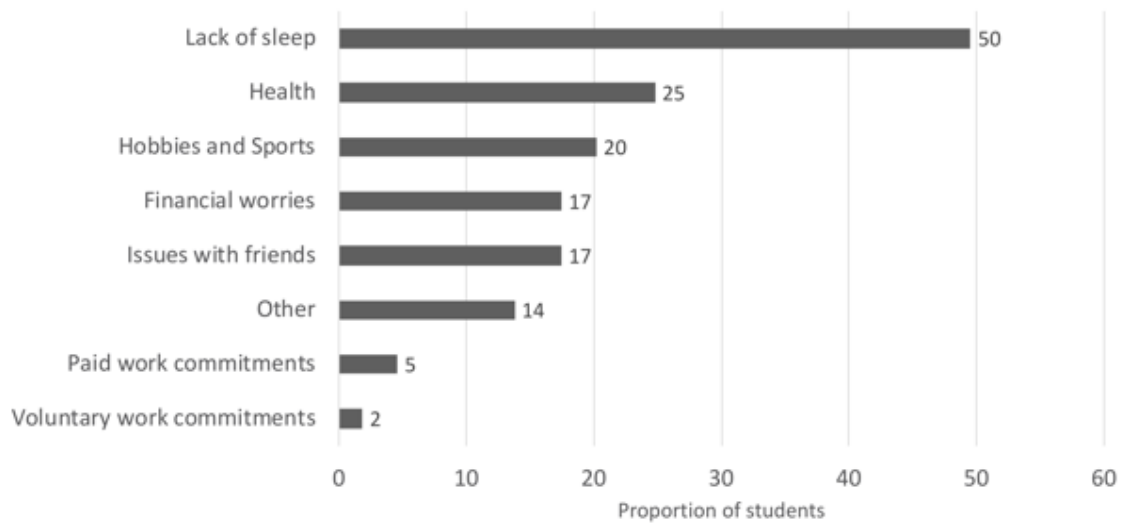


Figure 2: Effects of external factors on studies



Tables

Table 1: Baseline Background Characteristics of Study Participants

Participant Background		
	n=	%
Accommodation living		
With dental student peers	91	83
With non-dental student peers and friends	5	5
With family and or relatives	6	6
Partner	3	3
Alone	3	3
Relatives with healthcare background		
Dentist	14	13
Dental professional	3	3
Doctor	20	18
Other Healthcare Professional	34	31

Table 2: Stress in the previous 12 months and help seeking

	Students reporting stress in past 12 months who sought help n= (%)	Students seeking help not affected by stress in the past 12 months n= (%)	Total number Seeking help n= (%)
Personal tutor	15 (14)	6 (6)	21 (19)
Student Affairs tutor	2 (2)	0 (0)	2 (2)
Other dental school staff member	15 (14)	3 (3)	18 (17)
Partner	27 (25)	13 (12)	40 (37)
Other students on the course	44 (40)	23 (21)	67 (61)
Other students NOT on the course	28 (26)	17 (16)	45 (41)
Family member	50 (46)	26 (24)	76 (70)
Friend	30 (28)	22 (20)	52 (48)
Doctor	10 (9)	2 (2)	12 (11)
Counsellor	11 (10)	2 (2)	13 (12)
I have not shared my thoughts/problems	6 (6)	2 (2)	8 (7)

Appendix: Questionnaire questions

Reasons for studying Dentistry

My reasons for wanting to study dentistry were – (please list your top three reasons):

- Interested in topic
- Wanting a respectable career
- High salary potential
- Family tradition/Family wishes
- School/Peer expectations
- High employment potential after graduation
- Prospect of working abroad after graduation
- Supporting my local community
- This was my second choice of career (e.g. did not meet requirements for medicine)
- Suited to my personality

Work and Finances as a Student

I have regular paid employment throughout term time:

- Yes
- No

a. If yes, How many hours per week do you work in your paid employment? *Text response*

Which of the following best describes your usual hours of paid employment? – (Tick all that apply):

- Weekday evenings
- Afternoons/days midweek
- Weekend daytime
- Weekend evening

If you have paid employment. Which of the following statements best describes your income from paid employment throughout term time:

- Is used mainly for leisure/socialising
- Is essential to pay my University fees only
- Is essential to pay my weekly bills only
- Is essential to pay my fees and weekly bills

c. How much do you agree with the following statement:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I constantly worry about financial issues (e.g. paying for studies or basic bills)					

Hobbies and Interests

How much do you agree with the following statements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have been able to pursue my hobbies & interests whilst studying					
I have a good study - life balance					
I have been very stressed about my studies over the past 12 months					
Factors outside university prevent me from achieving the academic grades I am capable of					

Special skills/interests I have outside dentistry. (e.g swimming instructor, dance, arts, musical instruments) Please specify/give examples

Study issues

Which of the following have had a significant impact on your ability to study over the past 12 months (Tick all that apply):

- Financial worries
- Family issues
- Lack of sleep
- Issues with friends
- Paid work commitments
- Voluntary work commitments
- Health
- Hobbies and Sports
- Other (please specify)

How have these factors affected you and your studies? (select as many as appropriate)

- Loss of motivation
- Fatigue
- Feelings of stress and/or anxiety
- Feeling isolated
- Drop in academic performance
- Use of alcohol or drugs affecting your studies
- Missing classes & academic commitments
- Missing work or voluntary commitments
- Inability to focus/forgetful
- Depression
- Emotional Distress