

# Psychosocial Factors Affecting Mental Well-Being of Dental Students: A Qualitative Study

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## ABSTRACT

**INTRODUCTION:** Dental students often faced high levels of mental distress which contributed to lower mental well-being. This has a negative impact on their health and academic performance. Many previous studies focused on students who were already in a 'diseased' state with little focus on students who are well but at risk of developing poor mental well-being. A better understanding of the factors affecting the mental well-being dental students is needed. This study was aimed to explore the factors associated with mental well-being of dental students and to identify steps to promote their mental well-being. **MATERIALS & METHODS:** In this qualitative study, individual interviews were conducted among undergraduate dental students using semi-structured interview guide. The interviews were recorded, transcribed via verbatim and analyzed using thematic analysis. **RESULTS:** The analysis revealed three main themes; i) Impression of dentistry, ii) Stressors and iii) Mental health experience. This study elucidated the experiences and stressors of dental students as they advanced through their dental education especially in clinical years. Most of the students had experienced low levels of mental well-being which affected them negatively. The findings also showed opportunities for fostering better mental well-being. **CONCLUSION:** Undergraduate dental students often experienced low mental well-being due to the stressors they faced. Identifying the factors that influenced the mental well-being of dental students would allow for early intervention and fostering of mental well-being among dental students.

## Keywords

mental well-being, undergraduate dental students, psychosocial factors

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## INTRODUCTION

Dentistry is a challenging field with many stressors for the students. Hence, it is vital to equip dental students with good mental well-being so they can cope effectively with their stressors. The risk of development of mental illness is correlated with stress levels<sup>1</sup> and can impair the potential of an individual to function at full capacity. There is an inverse correlation between mental illness and mental well-being.<sup>2</sup> It is therefore imperative that mental well-being be promoted to better equip individuals with skills to cope with stressors.

Dental students were found to have poorer mental well-being in comparison to their counterparts in other health-related fields.<sup>3,4</sup> Dental students had lower psychological well-being<sup>5</sup> and higher prevalence of common mental disorders than the general public.<sup>6</sup> They reported having

some psychological disturbances throughout their studies<sup>7</sup> with higher levels of depression, anxiety and stress were often found.<sup>8-10</sup>

Undergraduate dental students experienced high levels of stress due to the workload and demands of dental school.<sup>10-14</sup> The Covid-19 pandemic also contributed to dental students' stress and anxiety.<sup>15</sup> Clinical students were found to have higher level of stress than pre-clinical students.<sup>14,16-21</sup> Besides being associated with higher prevalence of depression,<sup>22</sup> higher level of stress was also associated with lower grade point average, poorer physical and emotional health.<sup>23-25</sup>

Studies on the mental health of dental students concentrated on individuals who were already displayed

psychological distress. Not much consideration is given to discern and intervene those students who are not considered 'diseased' on a clinical scale. Without early identification, these students may remain undetected and fall through the gap. Early identification and intervention will help students cope better with the stress associated with the demands of dental curriculum.<sup>19,23,26</sup> Risk of mental disorders have been shown to reduce with the improvement in the levels of mental well-being and this can/may reduce the prevalence of mental disorders.<sup>2</sup> This study is aimed to shed light on dental students' experience, determine the factors associated with the dental students' mental well-being and identify suggestions or steps for mental well-being promotion amongst the dental students.

## MATERIALS AND METHOD

### Study design & Setting

This qualitative study involved undergraduate dental students at a local university in academic year 2019/2020.

### Method

Face to face, in-depth interview was conducted. The aim of this study was to obtain an insight impression and experience of mental well-being of the students and to allow them to share their opinion and thoughts on the matter. Each interview session lasted about 45 minutes.

### Sampling method & size

Purposive sampling was done. Dental students from Year 1 to Year 5 in the 2019/2020 academic year were invited to participate. Flyers were distributed and displayed on notice boards in the campus. Interested students, reached out to the researcher to enrol in the study through the class leader. Honorarium was given to all participants. Twenty participants were included for the interview as data saturation was already reached at this point.

### Instrument

Semi-structured interview guide was used to encourage discussion. The interview guide was created based the objectives intended to be answered which was further refined after a pilot study. The questions were designed to

determine motivation to study dentistry of the students, their experience with relation to mental well-being, to explore the difference in stress between pre-clinical and clinical years, to explore their coping mechanisms and factors affecting their mental well-being and also to identify suggestions and improvements to support their mental health.

### Data Collection Procedure

The facilitator ran the interview using the semi-structured interview guide. A classroom was prepared for the interview to ensure privacy. The interviewer and interviewee were seated comfortably with a table in between them for the recorder and other materials (consent form, questions, refreshments). Prior permission was obtained from all the participants as the discussion sessions were recorded.

### Data Analysis

The recorded interviews were transcribed via Verbatim and analyzed using Thematic analysis<sup>27</sup>. Excerpts from the interview included below have been edited to comply with standard written English or translated literally to English when the interviews were held in Malay.

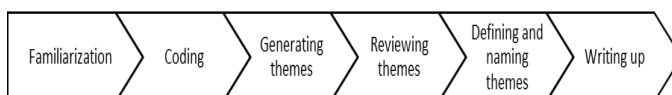


Figure 1. Seven steps in thematic analysis.

## RESULTS

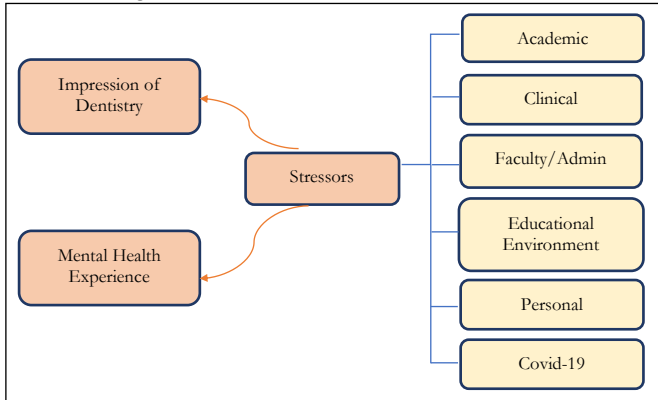
### The Participants

Twenty students participated in the qualitative study.

Table 1: Demographic information of the participants.

Demographic factors		Total (%)
Year of Study	Year 1	3 (15%)
	Year 2	5 (25%)
	Year 3	3 (15%)
	Year 4	3 (15%)
	Year 5	6 (30%)
Gender	Male	12 (60%)
	Female	8 (40%)
Citizenship	Malaysian	17 (85%)
	Non-Malaysian	3 (15%)

Themes Coding



**Figure 2:** Schematic diagram of the main themes and subthemes. Three main themes were identified; i) Impression of dentistry, ii) Mental health experience, iii) Stressors. The arrows show the connection between the themes that have emerged. The stressors identified contributed to the students' impression of dentistry and their mental health experience.

**Theme 1: Impression of Dentistry**

This theme encompassed how the students discern dentistry, their motivation for choosing dentistry as a career and their opinion about what makes dentistry challenging. The reasons for choosing dentistry among the participants varied. This included pure interest in dentistry, family influence, financial security as a dentist, the prestige, nature of the occupation and failure in getting into medical school. Regardless of their reasons, they found dentistry to be a demanding field. The students found dentistry to be more stressful than other courses, while opinions varied if dentistry was more stressful than medicine.

P3: *When it comes to studying, I think all courses are difficult. But, we have to deal with patients and there are different types of patients. Some patients are okay sometimes, then they don't show up for their appointments.*

**Theme 2: Stressors**

From the interview, many internal and external sources of stress among the students were identified.

**Academic Factors**

Academic pressure was an important stressor to many. Academic overload, where students felt overwhelmed by the subject content they had to cover was a common cause of stress.

P8 : *I think my main obstacle is the study itself because it is too much, too much.*

P14 : *Yes, of course because especially for the subjects they are taking too many topics in one day. I cannot cover all the topics.*

Clinical students said that they had packed schedule and found their workload burdensome, which often left them exhausted at the end of the day. Year three students faced difficulties with the medical subjects as they felt they were expected to be at par with the medical students. Examination stress made the students feel pressured and they described feeling down and not having any motivation. Failing in examinations also led to feeling down for the participants. The examination scheduling (long examination day, no gaps between papers) in the university appeared to be a source of stress for the participants. All the fifth-year students found the curriculum changed throughout the 5 years duration resulted in many confusions regarding their syllabus and examination format.

Transitioning to the first year of dental school was stressful as students had to adapt to a new environment with more challenging subjects.

P14: *..to be honest, my first year was very, very hard. But as my friend told me, the first year is when you learn to adapt. To adapt to a new environment.*

**Clinical Factors**

The transition to the clinical year was a challenge as students had to cope with a hectic schedule. The inconsistent clinical requirement due the curriculum change where some students had to find additional patients which was a burden for them. Completing clinical requirement was a struggle for some, as their clinical work progressed slowly, and this could jeopardize their examination. Patient factors such as getting suitable patients and patients' compliance, and even some patients' preference for being treated by female students caused stress for clinical students. Learning how to interact with patients also contributed to stress.

Limited clinical time and the struggle with the manual

skills, contributed to the pressure felt by the students. Students felt incompetent and unable to do a good job in the clinic due to their inadequate manual skills. Working in a team is essential in dentistry, but at times it can prove to be challenging. Not having a clinical partner to work with resulted in greater tendency to make mistakes. Whilst on the other scale, having an incompatible partner also led to stress.

### **Faculty/Administrative Factors**

Confusion resulted due to ineffective communication between the faculty and students when the new curriculum was implemented, and students reported they received confounding information. Perceived unfairness contributed to some of the students' burden as well. Being treated poorly or embarrassed in public by the teaching staff led to feelings of discrimination and unfairness.

Management of the clinic was an important stressor for the clinical students. The students found unpunctual faculty members and unavailability of supervisors during clinical sessions prevented clinical sessions from proceeding smoothly. Inefficiencies in the clinics, like having to wait for the folders or instruments of patients, also caused frustration among the students.

Poor relationship between the dental students and clinical support staff stemming from poor treatment of the students was a major stressor for all the clinical students.

P3: *...it is normal for students like us to make mistakes. But sometimes, even when we did nothing wrong, we are still scolded.*

P11: *Mm...they are always shouting at us. We are with our patients but they do not respect us..*

### **Educational Environment**

The negativity resulting from the perceived harsh treatment of the students by the supporting staff in the clinics contributed to the students' stress. Malfunctioning of dental chairs, shortage of dental instruments and dental materials prevented clinical sessions from proceeding smoothly.

### **Personal Factors**

Interpersonal relationships and conflict affected the students as well. Conflict with friends, roommate, or partner often affected the students and had a long-lasting effect on the students.

P3: *...when our friends argue, it affects us too.*

P5: *A week before the exams, I cried a lot. They didn't like how I worked, so they talked behind my back. And I started questioning myself.*

Poor time management skills caused stress for the students as they struggled to find time to study. Financial issues like having to buy personal protective equipment, pressure to pay the fees and financial management were stressors mentioned by the students. Adapting to a new environment was a struggle initially for some of the students. They had to establish a new social circle which initially made them feel isolated. Being away from family was also difficult for some of them.

P9: *It was stressful as I had just gotten to know people. I didn't even know my roommate well. So, I couldn't share anything.*

P5: *That's why I felt lonely, because I didn't have any friends right at the beginning.*

In addition to adapting to a new environment and having to establish new friendships, international students faced cultural differences, language barrier and isolation.

Some of the students questioned their own abilities and their own competencies which made them feel worse about themselves. Comparing their work to that of their peers contributed to feelings of inadequacy. External commitments outside of academia affected a student's time management which highlights the importance of managing time well. Different learning abilities affected how well the students were able to cope with the more difficult subjects.

### **Covid-19**

Many of the students were affected negatively by the pandemic with complaints of increased stress level, mental

fatigue, loss of motivation, deterioration of mental health. The lockdown resulted in lacked social interaction between the students.

*P16: Since Covid started, I just stay in my room. It's difficult to feel motivated.*

*P12 : I was home alone. Here, there are two or three students around but I still feel alone. It's difficult, there's no one to share with.*

*P20: I feel a little lonely as I am here. Everyone went back and my friends were not around. It was a little stressful for me.*

Clinical sessions were disrupted during most of the Covid pandemic year. Students were unable to finish their clinical requirements on time. Once clinical sessions resumed, the limited number of treatment rooms available made it difficult for the students to complete their clinical requirements. Academic schedules were more hectic to make up for the missed academic sessions. The switch to remote learning was not without its challenges. Poor internet connection, perceived learning gap with the online lessons, inconducive home environment for learning, family commitments and being easily distracted were the common issues faced by them.

### **Theme 3: Mental Health Experience**

Experiences of low mental health were common among the students. Students described feeling down, feeling anxious, running low on motivation, being isolated, feeling overwhelmed and some even having suicidal thoughts. Stressors described above contributed to their state of low mental health. Of the twenty students who were interviewed, only one student reported not to have experienced any events that affected them mentally.

## **DISCUSSION**

Dental students often reported poor mental health and with high prevalence of mental disorders<sup>3,9,10,25</sup> and it was found that most of the interview participants in our study reported having had negative experiences. Although it has been found that prevalence of depression is lower in those whose first career choice is dentistry<sup>9</sup>, our interview participants found themselves suffering from poor mental

health despite choosing dentistry as a career.

The interview revealed many sources of stress for the participants. Main sources of stress were academic factors like heavy workload and examinations which substantiated the results from previous studies<sup>12</sup>. As in previous studies<sup>14,16-19,21</sup>, participants of this study also found that clinical years were more stressful. The transition to the clinical year was difficult for some. Negative experiences with the clinic support staff and inefficiencies in the clinic affected all the clinical students that were interviewed. Being publicly shamed during clinical sessions led to feelings of anger and dissatisfaction. These factors - poor relationship with the clinic support staff, perceived inefficiencies in the clinic, and public shaming were stressors that were not discussed in previous studies and were distinctive to this study population.

Dental students were found to be negatively affected by financial concerns<sup>10</sup> and this was reflected in the qualitative study. First year students had difficulty initially as they adapted to a new environment and established a new social circle. The lack of social support led to feelings of vulnerability and loneliness. International students often felt alone, and they found lacked support from their peers. Language barrier was a challenge for them as they could not communicate effectively in the Malay language. They felt isolated as they didn't have family to turn to, had trouble connecting with other students and also felt lacked support from the university. This group of students often had more struggles as levels of social support has been found to correlate with depressive levels.<sup>22</sup> Having friends or family to turn to helps to mitigate stress which contributed to better mental well-being.<sup>28</sup>

The Covid-19 pandemic disrupted the lives of students and affected their mental well-being negatively.<sup>15</sup> Besides their insecurities with relation to the academic year, students had to adapt to distant learning and deal with the struggles of distant learning. The implementation of distant learning was quite an adjustment for them. Another source of worry during the pandemic was being away from their family.

Regardless of the students' motivation for pursuing dentistry as a career, they found dentistry to be challenging. Experience of poor mental well-being was common among the students who were interviewed. Many of their stressors were unavoidable. Hence, there is a need to equip dental students with more effective stress management techniques and introduce programs geared towards promotion of mental wellbeing. Our findings indicate that measures to identify individuals who are at risk of low mental well-being should be taken and strategies to boost levels of mental well-being can be introduced as high levels of mental well-being is vital to help the students cope with their stress effectively.

## CONCLUSION

This qualitative study allowed a better understanding of the experiences dental of students and revealed some distinctive stressors in this study population. Factors such as academic, clinical, faculty's administration, educational environment, personal and Covid-19 pandemic has emerged as stressors with the existing impression towards dentistry which contributed towards the mental health experience for the dental undergraduate students. Our findings may allow for tailor-made stress management programs that are suited to this study population.

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