

Submitted: 12 June 2023
Accepted: 24 October 2023
Published online: 2 April, TAPS 2024, 9(2), 81-86
<https://doi.org/10.29060/TAPS.2024-9-2/SC3066>

Dental surgery assistant trainees' perceptions of mental well-being and working in the dental clinic

Lean Heong Foo¹, Nurul Haziqah Binte Suhaimi², Saudha Binte Sadimin², Marianne Meng Ann Ong¹

¹Department of Restorative Dentistry, National Dental Centre, Singapore; ²Dental Assisting, National Dental Centre, Singapore

Abstract

Introduction: An online survey was conducted on 16 National Institute of Technical Education Certificate (NITEC) Dental Surgery Assistant (DSA) trainees in National Dental Centre Singapore to find out their perceptions and understanding of mental well-being.

Methods: The 43-item survey included (i) Psychological General Well-being Index (PGWB) with 22 items based on 6 domains (anxiety, depression, positive well-being, self-control, general health, and vitality); (ii) 5 items on mental health knowledge; (iii) 4 items on lifestyle; and (iv) 12 items on perceptions of mental well-being and working in the dental clinic. Responses were collated for descriptive analysis and Cronbach's alpha analysis was done for internal consistency for Likert scale items.

Results: The average PGWB score was 61.5 (range 18-89). Fourteen trainees (75%) indicated they were feeling depressed and 31.2% of trainees felt under stress in the past month. The majority (81.3%) of trainees recognised the role of exercise in maintaining mental health and 75% of trainees were able to differentiate between sadness and depression. However, 56.3% and 87.5% of the trainees incorrectly answered that mental and psychological disorders are not preventable conditions and mental disorders are caused by a wrong way of thinking respectively. The Cronbach's alpha on PGWB ($\alpha = 0.87$) and trainees' perception of working in the clinic ($\alpha = 0.76$) revealed good internal consistency.

Conclusion: The PGWB scores and survey analysis indicate there is a knowledge gap about mental health and the need to improve mental well-being in this cohort of NITEC DSA trainees.

Keywords: *Mental Well-being, Dental Surgery Assistant Trainee, Psychological General Well-being Index*

I. INTRODUCTION

In National Dental Centre Singapore (NDCS), Dental Surgery Assistant (DSA) trainees are required to complete a 1-year National Institute of Technical Education Certificate (NITEC) DSA programme to be qualified as a DSA. Similar to the training of dental students, DSA trainees undergo a significant transition from learning in a classroom setting (4 weeks pre-clinical didactic and observation) to a high-stress dental clinic work environment (clinical) when they start on-the-job training 1 month after commencing their programme. During this transition period, they need to multi-task and adapt to new clinical responsibilities related to infection control, patient management, and assisting clinicians. It

has been reported that 80% of 299 Israeli DSAs suffered from a high level of burnout where the most stressful work-related factors were low income, high workload, and work hazards (Uziel et al., 2019). A survey was thus conducted to gain insights into the perceptions of mental well-being and working in the dental clinic among NDCS's NITEC DSA trainees. This was a needs analysis survey done in June 2022 for a mental wellness module that aimed to provide support to DSA trainees enrolled in the 1-year NITEC DSA programme.

II. METHODS

An online anonymous survey with written consent was disseminated via Form.SG to the 2022 cohort of DSA

trainees to complete three months after starting their 1-year programme. The 43-item survey included (i) Psychological General Well-being Index (PGWB) with 22 items based on 6 domains (anxiety, depressed mood, positive well-being, self-control, general health and vitality) (Dupuy, 1984); (ii) 5 items on knowledge about mental health; (iii) 4 items on lifestyle; and (iv) 2 items on perception of mental well-being (adapted from Puspitasari et al., 2020) and 10 items on working in a dental clinic (crafted based on NDCS context). DSA trainees rated their level of agreement based on a 6-point Likert scale for PGWB (5 -most favourable response to 0 – unfavourable response) and a 5-point Likert scale for the perception of mental health and working in a dental clinic (5 – strongly agree to 1 – strongly disagree). The PGWB score ranges from 0 to 110, effectively representing an individual's comprehensive subjective well-being. Additionally, the six dimensions of the PGWB index provide valuable insights into the subjective well-being associated with each specific dimension. The survey responses were collated for descriptive analysis and Cronbach's alpha analysis was done for internal consistency for Likert scale items.

III. RESULTS

The entire cohort of sixteen DSA trainees {all female; age 17-50, mean 28.19 (23.39-32.99)} completed the online survey (100% response rate). The data of this study are openly available in the Figshare repository at <https://figshare.com/s/c71034f527c7c3fede14>.

Only 25% of trainees (4/16) had more than 1 year of prior working experience in a dental clinic. Their collated responses based on their second-month experience of the 1-year programme are as follows:

A) Psychological General Well-being Index (PGWB)

The average PGWB score for this cohort was 61.5 (range 18-89, 95% CI 52.80 – 70.20), indicating lower than average general well-being in this cohort {normal range 68-83 (Dupuy, 1984)}. No significant correlation was found between age and dental clinic experience on PGWB ($r=-0.03$; -0.06). The Cronbach's alpha in PGWB ($\alpha = 0.93$) indicated good internal reliability with a good individual domain analysis of 0.85 for all the domains (Appendix A: Table 1, Figures 2 and 3).

1) *General health*: The trainees achieved a mean score of 8.94 (Range 0-15) in general health. The majority (68.75%, 11/16) of trainees agreed they felt healthy enough to function.

2) *Positive well-being*: The trainees experienced a lower than moderate level of positive emotion and life satisfaction with a mean score of 9.94 (Range 0-20). Only 5 out of 16 trainees (31.25%) were happy with their personal life most of the time.

3) *Self-control*: The trainees possessed a moderate to higher level of self-control in regulating their behavior and emotions (mean 9.56, Range 0-15). However, about half of the cohort (56.25%, 9/16) admitted they felt a lack of control over their action in the past month.

4) *Vitality*: The trainees exhibited a moderate level of energy and vitality (mean 10.31, Range 0-20). However, 7 trainees (43.75%) admitted they felt worn out and exhausted most of the time in the past month.

5) *Depressed mood*: The trainees, on average, experienced a relatively moderate level of depressive symptoms in the past month (mean:9.88, Range 0-15). Fourteen trainees (75%) admitted they were feeling depressed and 31.2% of trainees (5/16) had felt under stress in the past month.

6) *Anxiety*: The trainees exhibited a moderate level of anxiety (mean 12.88, Range 0-25). Majority (81.25%, 13/16) of trainees admitted they felt high-strung quite a good bit of time in the past month.

B) Knowledge about Mental Health

Majority of DSA trainees (81.3%, 13/16) recognised the role of exercise in maintaining mental health and 75% (12/16) of trainees were able to differentiate between sadness and depression. However, 56.3% (9/16) of the trainees incorrectly answered that mental and psychological disorders are not preventable conditions, and a majority (87.5%, 14/16) incorrectly answered that mental disorders are caused by a wrong way of thinking (Appendix B).

C) Lifestyle

Half of the cohort exercised at least once a week. Only 50% of the cohort had self-care activities for themselves. Majority of the trainees (15/16) did not meditate and 50% of the trainees sought help from their friends and family when necessary (Appendix B).

D) Perception of Mental Well-being and Working in a Dental Clinic

Majority of the trainees also gave a neutral response (75%, 12/16) to the statement related to stress from working in the dental clinic. Majority agreed that mental health is important for their general health (87.5%, 14/16). Only half of the cohort indicated they were comfortable to work in the dental clinic (56.3%, 9/16) (Figure 1). About $\frac{3}{4}$ of the cohort believed they could complete the training programme and were confident to perform the on-the-job training (75%, 12/16). Majority (81.3%, 13/16) were willing to seek help if they encountered problems working in the dental clinic (Figure 1). The Cronbach's alpha of trainees' perceptions of working in the clinic ($\alpha = 0.76$) revealed good internal consistency.

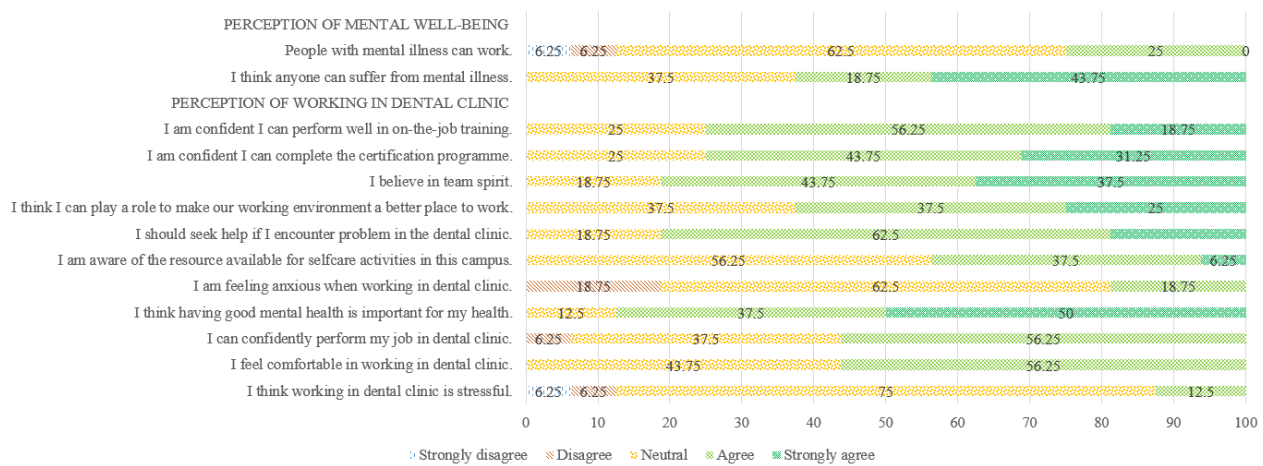


Figure 1. Perceptions of DSA trainees of mental well-being and working in the dental clinic in the second month of their 1-year programme

IV. DISCUSSION

Mental well-being is associated with one’s ability to cope with normal stresses of life and work productivity. This is particularly important in health professionals, including DSAs, to ensure the quality of patient care and professional satisfaction. To our knowledge, this is the first local survey to investigate DSA trainees’ perceptions of mental well-being and working in the dental clinic. The PGWB analysis revealed this cohort of DSA trainees had a lower-than-normal score that was even lower than a group of 320 Japanese dental students (61.5 versus 68.63) (Sugiura et al., 2005). Additionally, the trainees also demonstrated moderate levels of depression and anxiety, with a detailed analysis indicating a significant number experiencing stress. This observation highlighted the transition from pre-clinical to clinical training phase can be challenging and stressful with increased workload and responsibility, as evident among DSAs who demonstrated a moderate level of professional burnout (Uziel et al., 2019). A similar trend was observed in this transition phase for dental students, where stress was associated with increased responsibility and demands associated with caring for real patients (de Souza Ferreira et al., 2023). Despite the difference in curriculum and a larger student cohort, the Japanese dental students (Sugiura et al., 2005) appeared to cope with their training better as their PGWB revealed they were more relaxed (Anxiety 16.43 versus 12.88) and cheerful (Depression 11.24 versus 9.88) compared with our DSA trainees. This finding reflects the need for providing mental well-being support for our DSA trainees in their programme.

The misconceptions about mental health and infrequent self-care practices among trainees suggest a lack of awareness of mental wellness. Implementing a mental wellness module focusing on positive psychology, coping techniques like breathing exercises and meditation, and resource awareness can help address

these issues. The Trainees' willingness to seek help and recognise exercise's role in mental health shows openness to support and intervention. Our pilot data is constrained by a small sample size and the absence of a control group for comparison, making it insufficient for general population inferences. The limitation of PGWB includes only 6 dimensions and the potential of bias due to self-reported data. Future recommendations involve re-evaluating the impact of the mental wellness module at the end of the 1-year program, inclusion of qualitative data, and establishing a supportive work environment with accessible mental health resources and mentorship to enhance the well-being and job satisfaction of DSAs.

V. CONCLUSION

In conclusion, the survey findings from this small cohort of DSA trainees underscore the importance of addressing mental health and well-being in this group of learners. The high prevalence of depressive symptoms and reported stress among the trainees highlights the need for targeted interventions and support systems to promote mental well-being. Hence, a mental wellness module will be introduced to this cohort of DSA trainees and this survey will be repeated 3 months after the module completion to assess any changes in this cohort’s perception of mental well-being and working in the dental clinic.

Notes on Contributors

FLH reviewed the literature, contributed to the study conception, data acquisition, and data analysis, drafted, and critically revised the manuscript.

NHS contributed to the data acquisition, data analysis, and critically revised the manuscript.

SS contributed to the data acquisition, data analysis, and critically revised the manuscript.

MO contributed to the study conception, data acquisition and critically revised the manuscript. All authors gave

their final approval and agreed to be accountable for all aspects of the work.

Ethical Approval

This study was exempted from the formal Centralised Institutional Review Broad review by SingHealth Institutional Review Board (CIRB Ref: 2022/2122).

Data Availability

The data that support the findings of this study are openly available in the Figshare repository.

<http://doi.org/10.6084/m9.figshare.23501136>

Acknowledgement

We would like to thank Ms Liu Yanting for her help in data preparation and collection.

Funding

There was no funding involved in the preparation of the manuscript.

Declaration of Interest

The authors declare no conflict of interest.

References

de Souza Ferreira, F., Barros, I., da Costa Neves, T., Pazos, J. M., & Garcia, P. P. N. S. (2023). Stress amongst dental students in the transition from preclinical training to clinical training: A qualitative study. *European Journal of Dental Education*, 27(3), 568-574.

Dupuy, H. J. (1984). The Psychological General Well-Being (PGWB) index. In: Wenger NK, Mattson ME, Furberg CF, & Elinson J (Eds). *Assessment of quality of life in clinical trials of cardiovascular therapies*. (pp. 170-183). Le Jacq.

Puspitasari, I. M., Garnisa, I. T., Sinuraya, R. K., & Witriani, W. (2020). Perceptions, knowledge, and attitude toward mental health disorders and their treatment among students in an Indonesian university. *Psychology Research and Behaviour Management*, 27(13), 845-854.

Sugiura, G., Shinada, K., & Kawaguchi, Y. (2005). Psychological well-being and perceptions of stress amongst Japanese dental students. *European Journal of Dental Education*, 9(1), 17-25.

Uziel, N., Meyerson, J., Birenzweig, Y., & Eli, I. (2019). Professional burnout and work stress among Israeli dental assistants. *Psychology, Health & Medicine*, 24(1), 59-67.

*Foo Lean Heong
National Dental Centre Singapore
5, Second Hospital Avenue,
168938 Singapore
Email: foo.lean.heong@singhealth.com.sg

Appendix A: Detailed analysis of the Psychological General Well-being Index (PGWB)

	No. of Items	Total (n=16) *	Maximum score	Cronbach alpha
Total	22	61.50 (52.80 – 70.20)	110	0.93
General Health	3	8.94 (7.59 – 10.28)	15	0.85
Positive well-being	4	9.94 (7.92 – 11.96)	20	0.85
Self-control	3	9.56 (8.13 – 11.00)	15	0.85
Vitality	4	10.31 (8.71 – 11.92)	20	0.85
Depression	3	9.88 (8.30 – 11.45)	15	0.85
Anxiety	5	12.88 (10.32 – 15.43)	25	0.85

Table 1. Mean scores, 95% CI, and Cronbach alpha analysis of PGWB. *Mean scores and 95% CI

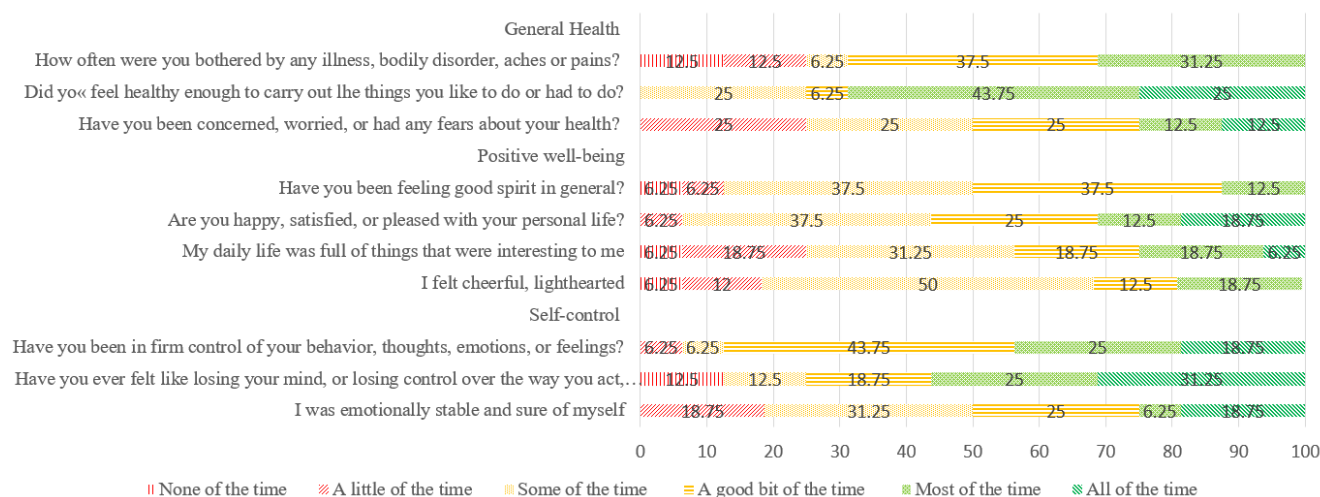


Figure 2. General health, Positive well-being, and Self-control domain of the PGWB of the DSA trainees in their second month of the 1-year programme

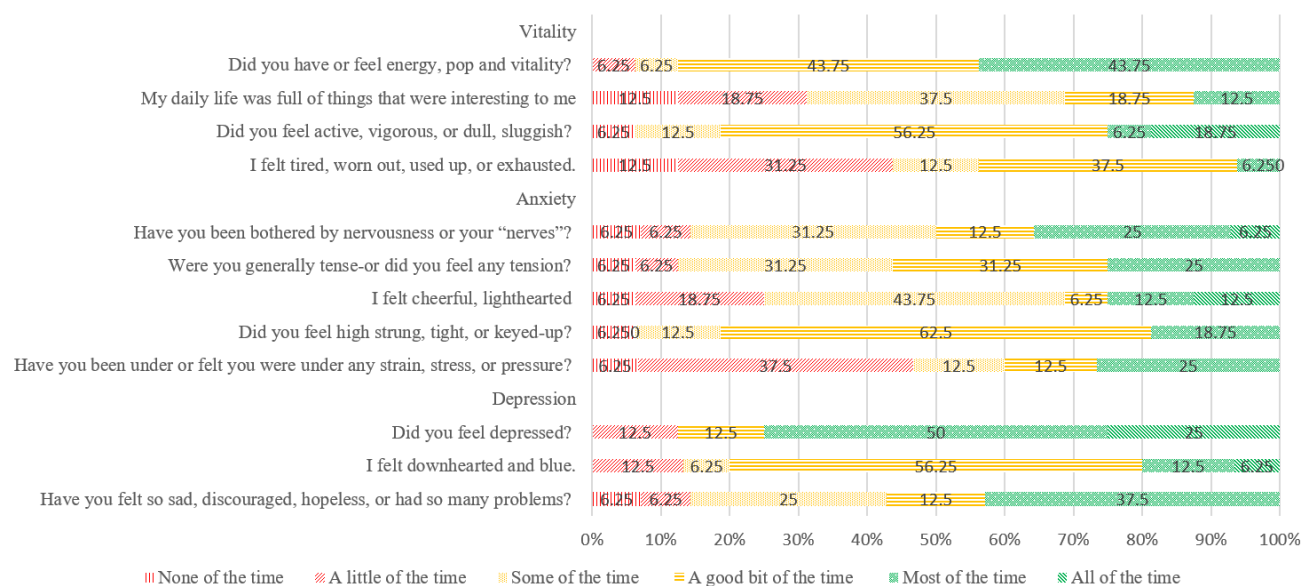


Figure 3. Vitality, Anxiety, and Depressed mood domain of the PGWB of the DSA trainees in the second month of their 1-year programme

Appendix B: Analysis of Mental Health Knowledge and Lifestyle-related Questions

Topic	Questions	Percentage of trainees answered correctly	
Knowledge of Mental Health	Exercise can help to maintain mental health.	81.25 (13/16)	
	Mental disorders are caused by the wrong way of thinking	12.5 (2/16)	
	The components of mental health include normal intelligence, stable mood, positive attributes, interpersonal relationships, and quality adaptability	75.0 (12/16)	
	Mental disorders and psychological problems cannot be prevented	43.75 (7/16)	
	Feelings of sadness and depression are the same	75.0 (12/16)	
Topic	Questions	Options	Percentage of Trainees
Lifestyle	How many times do you exercise in a week?	More than twice	18.75 (3/16)
		Once	37.50 (6/16)
		None	43.25 (7/16)
	Do you allocate time for self-care activities?	More than twice per week	18.75 (3/16)
		Once per week	31.25 (5/16)
		None	50.00 (8/16)
	Do you meditate?	Once per week	0
		Occasionally	6.25 (1/16)
		None	93.75 (15/16)
	Do you talk to family and friends when you encounter problems?	Yes	50.00 (8/16)
No		50.00 (8/16)	

Table 2. Responses of DSA trainees on Mental Health Knowledge and Lifestyle-related question