

Letters to the editor

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Coronavirus

Pandemic OPSD woes

Sir, the COVID-19 pandemic brought stressful restrictions and changed our lifestyles drastically. We have reported the influence of COVID-19 pandemic on oral psychosomatic disorders (OPSD): burning mouth syndrome (BMS), atypical odontalgia, oral cenessthopathy (OC), phantom bite syndrome and so on. While there are no significant differences in the scores of Zung's self-rating depressive scales (SDS) and pain catastrophising scales at the early period of the COVID-19 pandemic (2020),¹ we observed significant increases of psychiatric comorbidities and higher scores of SDS in the later period (2021).²

Our investigation for post-COVID-19 pandemic (2022) recently revealed the tendency of a re-decrease of psychiatric comorbidities. Moreover, the distribution of patients with OPSD has changed through the COVID-19 pandemic and has been returning to levels from before the COVID-19 pandemic (2018). In particular, the rate of patients with OC which shows indescribable, uncomfortable symptoms has tended to increase while that of BMS patients has decreased towards the later period of the pandemic.² We suggest that coping well with the pandemic in BMS patients without psychiatric comorbidities³ may attribute to the decreased rate of BMS patients, besides the change of rate of OC patients. During the pandemic, the exacerbations of comorbid psychiatric disorders led to an increase of OC; the rate of BMS then decreased relatively. Post-pandemic, a reduction of psychiatric stress resulted in fewer OC patients and the relative recovery of the rate of BMS patients.

Therefore, the stressful circumstances during the COVID-19 pandemic did

not simply affect onset of OPSD but may affect intolerance and vulnerability for the stressful burden that OPSD patients with psychiatric comorbidities might have. However, since the detailed symptoms of OPSD might have become more complicated through the pandemic, further studies with long-term follow-up including prognosis are required.

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Clinical standards

A highly retrograde step

Sir, we read with interest and complete agreement the article written by Professor Craig Barclay on the matter of the potential withdrawal of practical tests as part of the national specialist recruitment process in the UK.¹

We were deeply concerned to learn of the proposal to withdraw these practical tests which we consider to be a fundamentally important component of the selection process for trainees before they commence their training to become a specialist in their chosen clinical area. We consider that there is no conceivable reason to withdraw the practical element of the selection process, as it is critically important that future specialist trainees possess a high level of clinical skills and ability to ensure they can satisfactorily complete the rigours of a specialist training programme, to maintain patient safety, and

to permit appropriate use of resources in delivering their training.

As clearly explained by Barclay, given that there is no process of revalidation in dentistry (unlike medicine), the clinical standards of dentists are not routinely re-evaluated, which further increases the importance of ensuring that those embarking on specialist training programmes possess the clinical skills necessary to successfully complete the programme and achieve their career aims. We consider that the proposed amendments to specialist trainee recruitment in oral surgery and restorative dentistry that have been made by the National Medical and Dental Recruitment Selection Programme Board to remove the practical stations are inappropriate and would be a highly retrograde step. We call on those involved in the delivery of postgraduate training and education to ensure that patient safety is maintained, and that the selection process for trainees continues to assess clinical skills as a core component.

M. Milward, British Society of Periodontology and Implant Dentistry (BSP), Liverpool, UK

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Artificial intelligence

AI-based article screening

Sir, in evidence-based dentistry, systematic reviews play a crucial role by comprehensively analysing available data. However, searching numerous articles for relevance can be a time-consuming process. While Mahuli *et al.* acknowledged the utility of large language models (LLMs)

in risk of bias analysis and data extraction for systematic reviews and meta-analyses, they overlooked the laborious process of article screening.¹

In attempting to address this, I used two LLMs: ChatGPT 3.5² and Google Bard³ in the article screening process for a systematic review study. To conduct this systematic review, a dataset containing titles and abstracts of 1,111 articles underwent screening by two independent human reviewers. Concurrently, inclusion and exclusion criteria were defined for ChatGPT and Google Bard. Both AI models were prompted to evaluate articles, categorising them as 'Yes' (relevant), 'No' (irrelevant), or 'Maybe' (uncertain), accompanied by brief reasonings for their decisions. Following this, the models underwent training using ten samples from the dataset, with a human operator correcting their responses. Subsequently, 100 randomly chosen article titles and abstracts were manually given to the AI models for screening.

ChatGPT aligned with the human reviewers' conclusions in 76% of cases, demonstrating a notably higher agreement compared to Google Bard, which aligned in only 47% of cases. This comparative analysis underscores ChatGPT's efficiency in determining article relevance during the screening process, suggesting its potential as a valuable tool for systematic review screening in evidence-based dentistry. In contrast, Google Bard exhibited a comparatively lower degree of concordance with the human reviewers and less favourable performance, indicating limitations in its accuracy for this specific task. This suggests a necessity for further refinement or cautious consideration of its applicability in similar contexts.

In conclusion, the application of LLMs, particularly ChatGPT 3.5, shows promise in enhancing evidence-based dentistry by optimising the screening process for systematic review studies, ensuring a more comprehensive scope, minimising the chances of critical articles being overlooked and thereby enhancing the robustness and reliability of the final review. However, it is crucial to acknowledge that human intervention and oversight are imperative to prevent errors.

M. Mehrabian, Debrecen, Hungary

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<https://doi.org/10.1038/s41415-023-6692-x>

Sustainable dentistry

Insufficient floss data

Sir, I write further to a recent publication in the *BDJ* entitled 'Toxic ties', which raised the issue of PFAS being present in certain varieties of dental floss.¹

In a press release referring to K. E. Boronow *et al.*,² the American Dental Association remarked that the ADA Science Institute did not find the data sufficient to draw the conclusions which the research did.³

The study evaluated the blood samples of 178 women who self-reported on the usage of a particular brand of dental floss, to have greater PFHxS (perfluorohexanesulfonic acid) as compared to those who did not.²

The ADA Science Institute stated that a shortcoming of the study was the utilisation of fluorine measurements as a PTFE (polytetrafluoroethylene) marker, even though the subjects reporting floss usage were observed to have increased PFHxS levels.³

As PTFE is utilised in pharmaceutical, cosmetic, food and beverage applications, identifying the PTFE marker in dental floss would not establish it as the source of PFHxS in the study subjects.³

The ADA also noted that the retrospective study including self-reported data was likely to have other differences between the subjects reporting floss usage and otherwise.³

V. Sahni, New Delhi, India

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<https://doi.org/10.1038/s41415-023-6693-9>

Dental materials

Our little white friend

Sir, what a delightful article by Sharif Islam¹ about the very humble 'cotton wool roll'. It is now over 50 years since I first with tweezers picked up my first cotton wool roll and as I studied one today in my surgery, I realised that the design and shape has not altered over all that time. Every aspect of dental equipment and materials have all evolved over time except our little white friend which let's face it, is still probably the cheapest item in our whole surgery. As the writer said, 'thank you so much, cotton wool roll'.

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Restorative dentistry

Losses loom larger than gains

Sir, I hasten to reassure Mr Hassall¹ that my approach to moderate wear cases such as he showed (Fig. 17 [Fig. 1])^{2,3} involves informing patients about all the available options (including 'no treatment'), along with pros and cons, with their autonomy always being respected. Once those options are explained fairly, including that 'nothing in dentistry is either perfect or permanent', my patients have nearly always chosen the least destructive approach to preserve the maximum amount of their remaining healthy tooth tissue.

In the case that Mr Hassall showed, the patient lost serious amounts of their sound tooth structure (Fig. 23 [Fig. 2])^{2,3} electively, to 'gain' the dubious aesthetics of over-contoured monochromatic monolithic zirconia, with periodontal inflammation as a side effect (Fig. 27 [Fig. 3]).^{2,3}

For most people, the psychological pain of losing something valuable is twice



Fig. 1 Figure 17 of the original paper. Reproduced with permission from D. Hassall, 'The use of the monolithic ceramic and direct monolithic composite in the aesthetic rehabilitation of tooth wear', *Br Dent J* 2023; **234**: 406–412²