

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia.

Areca nut and oral cancer

Warnakulasuriya W, Chen T H H. Areca Nut and Oral Cancer: Evidence from Studies Conducted in Humans. *J Dent Res* 2022; DOI: 10.1177/00220345221092751. Online ahead of print.

Oral leukoplakia and oral submucous fibrosis are the main potentially malignant disorders caused by areca nut chewing that can progress to oral cancer.

Areca nut chewing is one of the major risk factors for oral cancer, with large-magnitude risks reported in studies comparing betel quid chewers and never-users, and it has been evaluated as a group 1 carcinogen by the International Agency for Research on Cancer. Data from a high-quality meta-analysis examining risk estimates are presented in summary form with additional information from more recent studies. The risk of oral cancer increases in a dose-response manner with the daily number of quids consumed and the number of years chewing. In the Indian subcontinent and in Taiwan, approximately half of oral cancers reported are attributed to betel quid chewing. Oral leukoplakia and oral submucous fibrosis are two main oral potentially malignant disorders caused by areca nut chewing that can progress to oral cancer with continued use. Ex-chewers seem to demonstrate lower risks than current chewers, but the impact of areca nut cessation on oral cancer risk has not been evaluated through randomised controlled studies.

<https://doi.org/10.1038/s41415-022-4425-1>

TMDs in dental students

Bal B, Sarak G, Oral K. Oral health-related quality of life and psychological states of dental students with temporomandibular disorders. *J Dent Educ* 2022; DOI: 10.1002/jdd.12951. Online ahead of print.

Dental students had a high frequency of TMDs and bruxism.

This study investigated the frequency of temporomandibular disorders (TMDs) in dental students, and evaluated the association between TMDs, psychological states and oral health-related quality of life (OHRQoL). Two hundred and ninety-three dental students completed the Symptom Checklist 90-Revised (SCL-90-R) and Oral Health Impact Profile 14 (OHIP-14) questionnaires and underwent a clinical examination according to diagnostic criteria for TMDs. TMDs were detected in 46% of the dental students. OHIP-14 scores of students with TMDs were significantly higher than scores for students without TMDs. Significant differences were observed in all SCL-90-R scores among students with and without TMDs, except for phobic anxiety and additional SCL-90-R subscale scores. The prevalence of myalgia was significantly higher in clinical students (27%) than in preclinical students (16%). OHIP-14 scores of clinical students were significantly higher than preclinical students.

<https://doi.org/10.1038/s41415-022-4427-z>

Biomarkers – health or disease?

Grant M M, Taylor J J, Jaedicke K *et al.* Discovery, validation, and diagnostic ability of multiple protein-based biomarkers in saliva and gingival crevicular fluid to distinguish between health and periodontal diseases. *J Clin Periodontol* 2022; DOI: 10.1111/jcpe.13630. Online ahead of print.

Biomarker panels containing four proteins with and without age as a further parameter can distinguish between periodontal health and disease states.

This study aimed to discover and validate differential protein biomarker expression in saliva and gingival crevicular fluid (GCF) to discriminate objectively between periodontal health and plaque-induced periodontal disease states. One-hundred and ninety participants were recruited from two UK centres. Ninety-five proteins were identified in both GCF and saliva samples, and 15 candidate proteins were selected based upon differences discovered between the donor groups. The best performing panels to distinguish between: health or gingivitis and periodontitis contained matrix metalloproteinase-9 (MMP9), S100A8, alpha-1-acid glycoprotein (A1AGP), pyruvate kinase and age (area under the curve [AUC] 0.970); health and gingivitis contained MMP9, S100A8, A1AGP and pyruvate kinase, but not age (AUC 0.768); and mild-to-moderate and advanced periodontitis contained MMP9, S100A8, A1AGP, pyruvate kinase and age (AUC 0.789).

<https://doi.org/10.1038/s41415-022-4426-0>

Virtual interviewing

Vallejo M C, Price S S, Vanek T W *et al.* Virtual interviewing in the COVID-19 era: A survey of graduate program directors. *J Dent Educ* 2022; **86**: 535–542.

Virtual interviewing is forecasted to have a presence in applicant selection in the future.

Due to the pandemic, virtual interviews became a mainstay education selection process. This study examined the benefits and pitfalls of the virtual interview process (VIP). An anonymous survey, for completion by a programme representative, was sent to graduate medical education and advanced dental education programmes at West Virginia University. Fifty-two of the programmes (70%) completed the survey. Zoom was the most frequently used platform. Approximately two-thirds of the interviewers thought VIP allowed promotion of the university but also reported experiencing video-conferencing fatigue. About six in ten felt VIP could introduce bias and disadvantage some applicants. Compared to the previous in-person cycle, 67% of programmes invited more applicants and 73% interviewed more applicants. Regarding the 2021–2022 interview cycle, 56% of programmes plan to offer either an in-person or VIP, while 8% plan to keep their process completely virtual.

<https://doi.org/10.1038/s41415-022-4428-y>