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### **Covid-19 Impacts on Bruxism and Emotional Well-Being of Dentistry Students**

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**Objectives** To investigate and compare emotional well-being and incidence of bruxism among first and last-year University of Tartu dentistry students pre- and post-COVID.

**Methods** Randomized sample included ten first-year and ten last-year students. Participants were clinically examined for signs of bruxism and completed a questionnaire with seven sections: general information, academic progress, sleep quality, emotional well-being, perceived stress scale, bruxism symptoms and possible impact of COVID-19. The study was carried out in 2020 and in 2024 under analogous conditions, statistical analysis used Pearson correlation.

This study was approved by The Ethical Committee of University of Tartu: 372/T-7.

**Results** Mental exhaustion was reported by all fifth-year students, excessive anxiety by 40% of students from each year. Nicotine and tobacco products were used by 80% of first-year and 40% of fifth-year students. First-year students prone to bruxism experienced higher emotional difficulties ( $r=0.774$ ). “Probable bruxism” was present in 60% of fifth-year students, whose alcohol consumption and bruxism symptoms correlated negatively ( $r=-0.765$ ). Among first-year students there was strong correlation between bruxism and several emotional parameters. In contrast, last-year students showed strong correlation between academic progress and several emotional parameters.

First-year students’ emotional well-being correlated with changes in anxiety during lockdown ( $r=0,453$ ), changes in ability to concentrate during lockdown ( $r=-0.433$ ) and possibilities to practice a hobby during lockdown ( $r=0.485$ ). Last-year students exhibited correlation between emotional well-being and living alone ( $r=0.562$ ) as well as between emotional well-being and changes in anxiety during lockdown ( $r=-0.780$ ).

In comparison with the initial study, general emotional well-being among dental students has deteriorated, yet symptoms of bruxism as well as sleep disorders have become less frequent.

**Conclusions** Study’s findings suggest that symptoms of bruxism and emotional disorders continue to occur among dentistry students. Deterioration of emotional well-being may cause academic difficulties, amplify use of nicotine and tobacco products and increase the incidence of bruxism. COVID-19 can be considered among causes of upward trend in emotional difficulties.