Salivary stress biomarkers- Are they predictors of academic assessment exams stress?

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Purpose: The present study was conducted on undergraduate dental students to assess and compare the levels of salivary stress biomarkers including cortisol, immunoglobulin A and α-amylase enzyme during periods of academic assessments and non assessments and to relate these biomarkers to students' academic performance.

Methods: Saliva samples were collected from undergraduate dental students; one before taking a final assessment exam and another during non assessment period. Salivary stress biomarkers concentrations were obtained using Enzyme Linked Immunosorbent Assay (ELISA).

Results: The level of salivary stress biomarkers including s-cortisol, α-amylase and immunoglobulin A significantly increased during periods of assessment exams as compared to non assessment (p=0.000, 0.001 and 0.003 consecutively). The study found a significant correlation between salivary α-amylase and academic performance especially among male students (p=0.008) and those in their final academic year (p=0.040).

Conclusion: We conclude that the stress of academic assessment can markedly increase the level of salivary stress biomarkers. Students who show less academic performance generally depict higher levels of salivary α-amylase, especially male students and those in their final academic year.

Biography
Soliman Ouda has completed his Ph.D. from Al-Azhar University, Egypt and postdoctoral studies from ULM University School of Dental Medicine, Baden-Württemberg, Germany. December 1994, He got PhD degree in Oral medicine, Alazhar University Cairo. December 1988, He got his Master Degree in Oral medicine and periodontology Alazhar University Cairo. Currently he is a Professor in Oral medicine division, Oral diagnostic Sciences Department, king Abdulaziz University.

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