UNIVERSITI TEKNOLOGI MARA

SALIVARY BIOMARKERS ASSOCIATED WITH EXAMINATION STRESS AMONG MLT FINAL YEAR UNDERGRADUATES

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Project submitted in partial fulfillment of the requirement for the degree of Bachelor (Hons.) in Medical Laboratory Technology

Faculty of Health Sciences

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DECLARATION

I hereby declare that this thesis is based on my original work. I also declare that this thesis has not previously or concurrently submitted by any other degree student at UiTM or other institutions.

MAY 2011 .....

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ABSTRACT

SALIVARY BIOMARKERS ASSOCIATED WITH EXAMINATION STRESS AMONG MLT FINAL YEAR UNDERGRADUATES

This study aims to identify the association of academic examination stress with salivary cortisol, salivary Immunoglobulin A (IgA), and salivary alpha-amylase. In addition, this study is also to assess the self-perceived stress before and after an academic examination and its association with the marks scored. Five minutes unstimulated saliva sample were collected from thirty-nine Medical Laboratory Technology (MLT) final year undergraduates before and after a one and a half hour written test. The students also indicated how stress they are on a scale of 1 to 5 rating point, before and immediately after the test. Higher cortisol levels were observed before the exam ($p<0.001$) and IgA showed higher levels after the exam ($p=0.032$). No significant differences were observed for alpha-amylase before and after the exam ($p=0.140$). The students perceived a higher level of stress prior to the test ($p=0.006$). There was a no correlation between before ($r=0.098$, $p=0.554$) and after exam self-perceived stress with exam marks ($r=-0.294$, $p=0.126$). These findings suggest that salivary cortisol and IgA could be a useful stress biomarker associated with acute stress such as examination.

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