Aplikasi regresi linier ganda pada bidang kedokteran gigi

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Abstrak

This was a non-reactive research using secondary data (n = 30). The objective of this study was to investigate the linear regression in dentistry using data analysis with computer programs MINITAB 13 and SPSS 13. Research in dentristry often employs simple or multiple linear regression. A researcher should have adequate comprehension on linear regression analysis in order to gain valid and applicable regression equation. This study used multiple linear regression analysis with independent variable (age and oral hygiene) and dependent variable (tooth caries). It was found that all assumptions of the multiple linear regression analysis were fulfilled. However, the result of t test showed that the variable of age revealed insignificant result (p = 0.932), so that the variable of age should be excluded from the analysis. Subsequently, simple linear regression analysis was performed to the independent variable (oral hygiene) and the dependent variable (tooth caries). It was found that all assumptions of the multiple linear regression analysis were fulfilled. The result of t test showed that oral hygiene variable was significant (p = 0.000). F test revealed p = 0.000, indicating the validity of the result. The obtained regression equation was found to be applicable. The regression equation obtained was as follows: 1.56 + 2.62 OHI-S, indicating that in any increase of one OHI-S unit, the caries increased 2.62 unit.