

**ABSTRACT**

Blood glucose is the sole source of energy for brain to work optimally. Glucose insufficiency in brain may cause disruption of short-term memory, impaired attention and decline in learning achievement. Optimal glucose levels is needed, people fully concentrate on learning and not easily tired in the class. This study aims to investigate the relationship between concentration of blood glucose levels and learning concentration between male and female students of Faculty of Medicine, Airlangga University. Design of this research quantitative ex post facto. Involving 79 samples consist of 39 male samples and 40 female samples were taken by simple random sampling. Blood glucose levels were measured from capillary blood using Accu Check®. Learning concentration known through Digit Span Test. The result showed from 79 samples, 78 samples have good learning concentration, and one sample in medium category. Independent Sample T-Test showed that learning concentration index between women and men has no correlation ( $p=0.483$ ). Pearson Test gives result that there is no correlation between learning concentration and blood glucose levels ( $p=0.497$ ). ANOVA test ( $p=0.529$ ) showed no differences on learning concentration among groups of blood glucose levels (70-95 mg/dl; 96-120 mg/dl in men and women). There was no difference in learning concentration between male and female students, there was no relationship between random blood glucose and learning concentration among students of Faculty of Medicine, Airlangga University. Low prevalence learning concentration index can be caused by better educational background and high enough socioeconomic status. Further studies with larger sample sizes, blood glucose that aren't in normal level, adding other variables such as student activities and grade point, also adding other control variables are needed to support these results.

**Keywords: random blood glucose, learning concentration, college student**