

## USER INSTITUTIONS OF OFFICE WORKERS IN GHANA: INVESTIGATING THE DIFFERENCES

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### ABSTRACT

The aim was to investigate whether there are differences in the institutions of office workers based on their anthropometric measurements (such as popliteal to floor height, buttock to popliteal length, elbow to seat height, sitting shoulder height, knee height and width of bitrochanter). It follows that, anthropometric measurements of a number of office workers' from three public institutions in Ghana were studied in a survey. The study employed a Multivariate analysis of variance (i.e. a versatile multivariate statistical technique) for the data analysis. In the results, the p - values of the four different multivariate tests (Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root) were all significant given  $p = 0.000 < 0.050$ . The finding was that, there was a significant effect of the anthropometric measurements in the three institutions considered as a group. Thus, the three institutions differed generally on the six anthropometric measurements variables. The main effects of the individual dependent variables was that four anthropometric measurements (popliteal to floor height, elbow to seat height, knee height and width of bitrochanter) significantly differ in the three institutions. The post hoc analysis was also carried out using the pairwise comparisons to know the institutions where the differences came from.

**Keywords:** Anthropometric measurements, office furniture, MANOVA, Public institutions, Ghana.