



DATA ANALYSIS ANTHROPOMETRIC FACIAL: A STUDY NON RANDOMIZED

Brunno Kalyxton Sousa Ramos*

Universidade de Brasília - UnB, Brasília, Brasil – bks_ramos@hotmail.com

Pedro Luiz Pinto de Lima

Universidade de Brasília - UnB, Brasília, Brasil – pedrolpb@gmail.com

Abstract

The work in question was originated from studies of a Brazilian federal police agent. The objective of the agent's research was to develop and analyze effective tools to identify people through photos using the science of anthropometry.

The focus of this work was primarily to show a strategy of how to conduct an analysis of a non-randomized experiment with repeated measures in space, applied in a study of differentiation methods of anthropometric marks.

Given the small number of studies with the analysis of non-randomized trials, this work has exposed several lines of reasoning and alternatives for conducting the analysis of this type of experiment using the techniques of exploratory analysis, design of experiments, mixed models, univariate and multivariate analyzes.

It began with the exploratory analysis, observing the characteristic data through graphics and tables of averages and variances. After, we tried to create out the modeling of the experiment using the methodology of split plots and at the end of this topic, modeling with mixed models. Also, univariate and multivariate analysis was performed and, due to the type of data being analyzed and with confirmatory character, an analysis of normality of variables was also made.

The initial exploratory analysis indicated small differences between the marking procedures studied, when analyzed more deeply with mixed models, was noted that there was a statistically significant difference between them. Univariate and multivariate analyzes also confirmed this significant difference between both methods.

Keywords: repeated in space; normal test; mixed models; multivariate analysis.