Statistics 6300 - Class Project Proposal

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**Introduction:** Personality refers to individual differences in characteristic patterns of thinking, feeling and behaving. A good personality will help people have comfortable relationships with others and will surely help people in the career development as well. Will the life experiences eventually change personality? Therefore, we are going to investigate whether age, which we have divided into 4 different age groups, under 30, 30-40, 40-50, 50 and above, has significant impact on different aspects of personality, such as social dominance, sociability, stress reaction, worry scale, impulsivity, thrill-seeking.

**Data Collection:** As required, we use the secondary source of data, which named “interest”, collected from the website <http://psych.colorado.edu/~carey/Courses/PSYC7291/ClassDataSets.htm>. The website is a psychological course in University of Colorado. The data is designed primarily for multiple regression and SEM, however, we will use other methods to analyze partial data (including age, gender, social dominance, sociability, stress reaction, worry scale, impulsivity, and thrill-seeking) instead the two methods mentioned above.

**Methods**:

Multivariate normality checking: Ho: the data are multivariate normal

Ha: the data are not multivariate normal

Univariate normality checking: Ho: vs. Ha:

One –way MANOVA test: Ho: vs. Ha: At least one differs (age)

One –way ANOVA test: Ho: vs. Ha: At least 1 differs

Multivariate Two-way MANOVA:

A – Gender – 2 levels: 1 = male, 2 = female and B – age– 4 age groups – 4 types

6 dependent variables : y1 = social dominance, y2 = sociability, y3 = stress reaction, y4 = worry scale, y5 = impulsivity, y6 = thrill-seeking

Multivariate: Interaction: Ho: vs. Ha: At least one

Univariate: Interaction: For : Ho: vs. Ha: At least one

Main effect: For Hoa: vs. Haa: (gender)

For Hob: vs. Hab: At least 1 differs

**Conclusions and Recommendations**: Detail please sees in the paper.

Our group prefers not to do the presentation in class. Thanks!