# Birth Order, College Major, and Social Behavior

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## Introduction

Callous personality traits, such as lack of empathy and aggression, as well as signs of psychopathy, have all been linked to antisocial behavior in adolescents and youth, (Frick & White 2008). These traits can be found in sibling behavior, correlational with birth order (Odudu et. al 2020). Similarly, Machiavellianism is related to immoral behavior and manipulativeness, and has been correlated to college major, (Tang & Chen 2008).

To replicate and advance these findings it was expected that those in social science majors are more likely to exhibit psychopathic and callous personality traits than those who major in business. It was also hypothesized that female psychology majors would report more antisocial personality traits than male psychology majors. Alternatively, it was expected that business majors will report more antisocial personality traits than nonbusiness majors. Additionally, it was hypothesized that those who are arts majors are least likely to display signs of antisocial behavior than non arts majors.

Another aim of the current study is to examine how birth order relates to antisocial behaviors. It was expected that oldest children are more likely to exhibit signs of antisocial behavior than middle or youngest children. Only children are hypothesized to be least likely to exhibit antisocial behavior. In families with four or more children, the middle children will exhibit more antisocial behavior than the oldest or youngest.

## Method

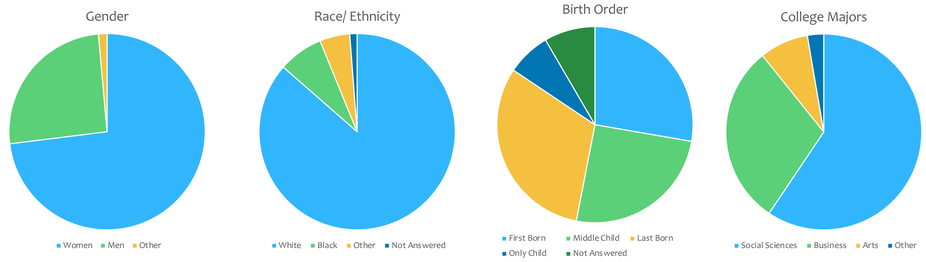
### Participants

Participants for this study are college students, aged 18 years and older. Data from approximately 80 participants were collected.

### Procedures & Measures

The survey was conducted using the online survey platform, Sona Systems. The survey took about 10 minutes to complete. The questions asked the participants to rate how much they agreed with each statement presented using a five- response option scale ranging from 1 = "Disagree Strongly" to 5 = "Agree Strongly."

## Participants Demographics




## Results

**Table 1**
**Descriptive Statistics for Study Variables**

| | Overall | Women | Men |
|---|---|---|---|
| | M (SD) | M (SD) | M (SD) |
| Antisocial Subscale | 1.48 (0.53) | 1.19 (0.14) | 1.70 (0.79) |
| Machiavellianism Subscale | 3.21 (0.57) | 3.07 (0.35) | 3.40 (0.55) |
| Psychopathy Subscale | 2.19 (0.58) | 2.13 (0.56) | 2.36 (0.56) |
| Callous Affect Subscale | 2.41 (0.52) | 2.30 (0.47) | 2.78 (0.72) |

The average scores for each of these subscales is depicted in the chart to the left, as well as the gender averages for each of the subscales.

**Table 2**
**Correlations Between Subscales**

| | 1 | 2 | 3 |
|---|---|---|---|
| 1. Antisocial Subscale | - | | |
| 2. Machiavellianism Subscale | .161 | - | |
| 3. Psychopathy Subscale | .553** | .457** | - |
| 4. Callous Affect Subscale | .363** | .380** | .646** |

*Note.* ** = $p < .01$

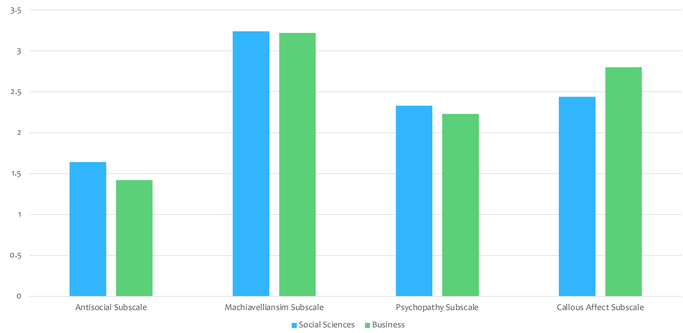
In this correlation table it is shown that each of these subscales have a positive correlation statistic. This indicates that each of the variables correlate with each other.

An independent samples t- test were also used to test whether there was a significant difference in scores female psychology majors and male psychology majors, where there showed to be no significant difference.

The same test was run to analyze the scores for arts versus non arts majors, and business versus nonbusiness majors. Each of these tests also concluded that there was no significant difference in scores.

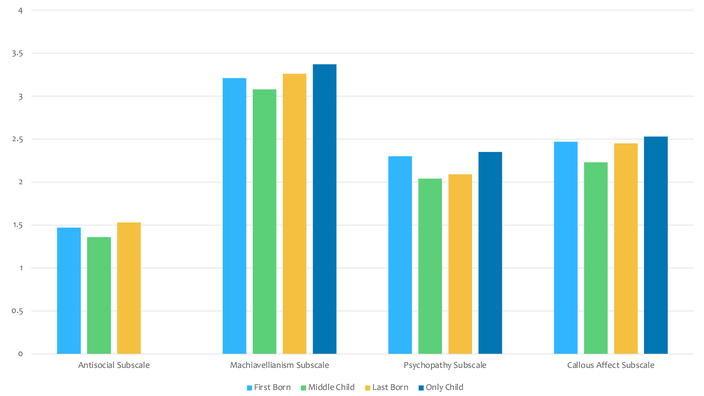
## Results

**Figure 1.**
*Examining Major Differences in Antisocial Behavior, Machiavellianism, Psychopathy, and Callous Affect Using Independent Samples t Tests*




When testing the difference in scores on these subscales, the score between those in Social Science majors and Business majors did not significantly differ.

**Figure 2.**
*Examining Birth Order Differences in Antisocial Behavior, Machiavellianism, Psychopathy, and Callous Affect Using One- Way ANOVAs.*




Using a One- Way ANOVA, the significance in scores by birth order was tested for each subscale. None of the scores came back statistically significant from each other.

## Discussion

After conducting this study and running multiple independent samples t- tests and ANOVAS, none of my hypotheses proved to be statistically significant. Men showed to score slightly higher than women overall but did not have a high enough score to be significant.

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