

# The Relationship Between Executive Skills, Cognitive Failures, and Memory in College Students

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## Introduction

- Executive skills, cognitive failures, and memory are matters that are important across multiple disciplines and professions and are relevant across the life span.
- Executive functioning is a neurocognitive process used for achieving a goal (Marshall, 2016; Georgiou & Dias, 2018).
- Cognitive failures are mental lapses that occur in the cognitive system due to a lack of cognitive control (Unsworth, et. al., 2012)
- Previous studies have found these factors to be significantly related (Harvey & Miller, 2017; Unsworth, Brewer, & Spillers, 2012), yet there is a lack in research on the relationship of these factors within Black college students.

## Research Questions

1. Is there a significant relationship between executive skills and cognitive failures?
2. Is there a significant relationship between executive skills and memory?
3. Is there a significant relationship between cognitive failures and memory?

## Hypotheses

- Executive skills will be negatively correlated with cognitive failures.
- Executive skills will be positively correlated with memory.
- Cognitive failures will be negatively correlated with memory.

## Method

### Research Design

- This study was conducted using a correlational design.
- Convenience sampling was used to recruit participants.
- Participants were asked to complete three surveys (Executive Skills Questionnaire, Cognitive Failures Questionnaire, Multifactorial Memory Questionnaire).
- Surveys were disseminated via Qualtrics.

### Participants

| Gender |             | Classification   |             | Race  |             |
|--------|-------------|------------------|-------------|-------|-------------|
| Male   | 71 (18.5%)  | Freshman         | 19 (5%)     | Black | 338 (88.3%) |
| Female | 280 (73.1%) | Sophomore        | 48 (12.5%)  | White | 5 (1.3%)    |
| Other  | 5 (1.3%)    | Junior           | 77 (20.1%)  | Asian | 1 (.3%)     |
|        |             | Senior           | 179 (46.7%) | Other | 11 (2.9%)   |
|        |             | Graduate Student | 19 (5%)     |       |             |

### Instruments

- Cognitive Failures Questionnaire - a measure of self-reported failures in perception, memory, and motor function
- Executive Skills Questionnaire - measures responses and groups them in twelve executive skills categories
- Multifactorial Memory Questionnaire - The section of the MMQ used in this study is Memory Mistakes. It asks participants to identify how often they've made common memory mistakes over the span of two weeks.

## Results

|     | ESQ     | MMQ     | CFQ     |
|-----|---------|---------|---------|
| ESQ |         | .473**  | -.277** |
| MMQ | .473**  |         | -.610** |
| CFQ | -.277** | -.610** |         |

\*\* . Correlation is significant at the 0.01 level (2-tailed)

## Discussion

- Analyses were conducted by using IBM Statistic Package for Social Sciences (SPSS), v.25, using Pearson Product Moment correlation to examine the relationship between the three variables.
- The findings show that there is a significantly positive relationship between ESQ and MMQ.
- The findings show that there is a significantly negative relationship between ESQ and CFQ.
- The findings show that there is a significantly negative relationship between CFQ and MMQ.

## Key References

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*The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305B170017 to Florida State University. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.*

