



THE ASSOCIATION BETWEEN GRIT, GROWTH MINDSET, AND STRESSFUL EVENTS ON ACADEMIC ACHIEVEMENT IN COLLEGE

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Introduction

- Research has shown the many benefits of growth mindset (Yeager, Paunesku, Walkton, & Dweck, 2013) and grit in education (Duckworth, Peterson, Matthews, & Kelly, 2007).
- In contrast, higher levels of family stress has been previously shown to predict lower grades in African American students (Charles, Dinwiddie, & Massey, 2004).
- Students' may not attain others' level of academic success; they can, however, outperform their own previous results (Martin, 2015). Promoting the application of grit within our academic experience will help the trajectories of students' academic development.
- Students' must have the comprehension that outcomes from growth mindset will be developed over a time period. Growth is the very aspiration of education, and the endless quest for growth (Dweck, 2015) is the sole purpose for life.
- Life direction is both a contributing factor and a positive cause of individuals having grit. Defined as a passion and perseverance for one's long-term goals, grit can be demonstrated through adaptiveness and commitment to a purpose (Hill, Burrow, & Bronk, 2016). When determining who are prone to success, the most obvious candidates are those who have a passion for their long-term goals and persevere towards the attainment of those goals.
- There is limited research that has examined the impact of family life stressors on academic performance, and how it relates to grit and growth mindset.

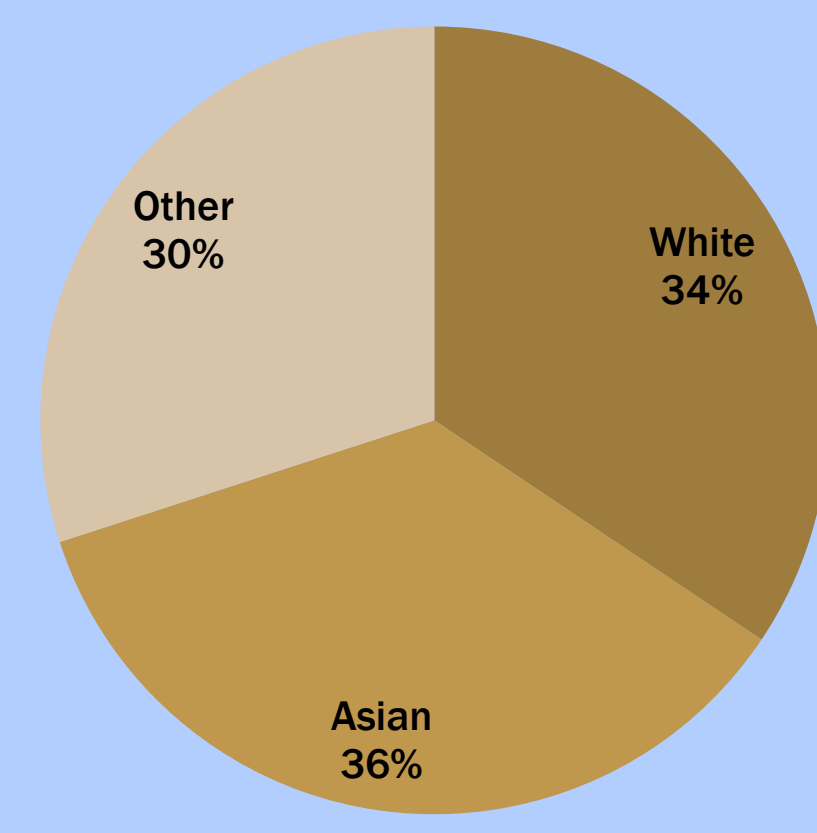
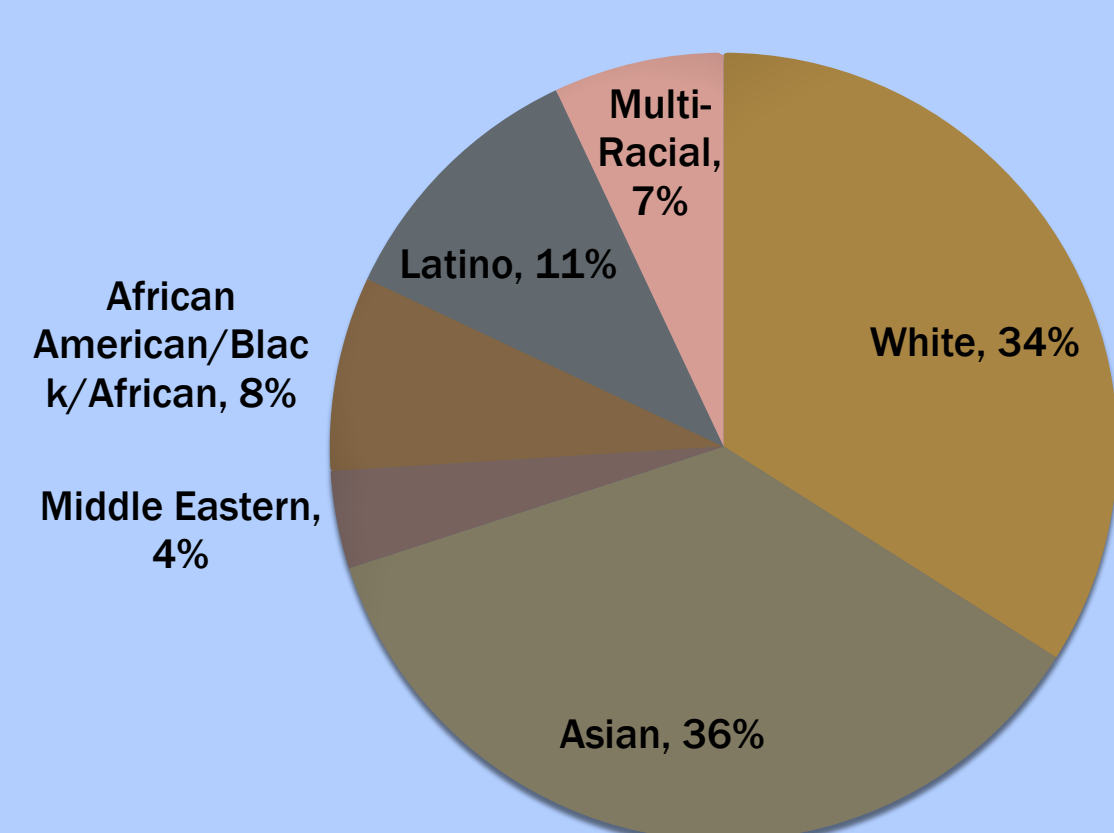
Research Questions

1. Does family stress, grit, and growth mindset correlate with academic achievement in college students?
 2. Are there racial and gender differences in grit and growth mindset in college students?
- We predicted that grit and growth mindset would be associated with higher GPAs, whereas experiencing family stressors would be associated with lower GPAs.
 - Furthermore, given that students of color may experience more life stressors, we hypothesized that students of color would experience more family stress and that would be associated with lower student grades.

Method

Participants:

- We studied a total of 114 students (66% female)
- Ages ranged from 18 to 46 ($M = 21.93$, $SD = 5.57$)



Method

Measures:

- **GPA.** Participants self-reported their current cumulative GPAs.
- **Grades.** Participants also self reported since being at their college, what types of grades they have received: (1) *Mostly As*, (2) *Mostly As and Bs (90s and 80s)*, (3) *Mostly Cs and Ds (70s and 60s)*, *Mostly Fs (50s)*.
- **Grit.** Grit was measured using the 12-Item Grit Scale (Duckworth, Peterson, Matthews, & Kelly, 2007). Participants rated how much the 12 items were like them (e.g., I have overcome setbacks to conquer an important challenge). Response scales ranged from (1) *Very much like me* to (5) *Not like me at all*, ($\alpha = .79$).
- **Growth Mindset.** Growth mindset was measured using the Mindset Works Mindset Assessment Profile Tool (Mindset Works, 2012). Participants rated 8 items with a response scale that ranged from (1) *Disagree a lot* to (6) *Agree a lot* (e.g., No matter how much intelligence you have, you can always change it a good deal), ($\alpha = .54$).
- **Family Stress.** How is your family – Difficult Situations for Adults and Adolescents (Fundación Kellogg, 1996) assessed level of family unrest – particularly tensions due to health problems (physical, mental, emotional) and events in the family (divorce, change of housing, conflicts). Response scales included the following format: (0) *Did not occur*, (1) *Occurred but did not affect my family*, (2) *Occurred and affected my family somewhat*, and (3) *Occurred and affected my family a great deal*, ($\alpha = .76$).

Procedure

- We conducted an online survey to assess various characteristics and experiences of college students.
- The survey took approximately 30-45 minutes to complete.
- The Bellevue College Faculty of the Psychology Department distributed the survey to students.
- We collected data from November 2016 to March 2017.

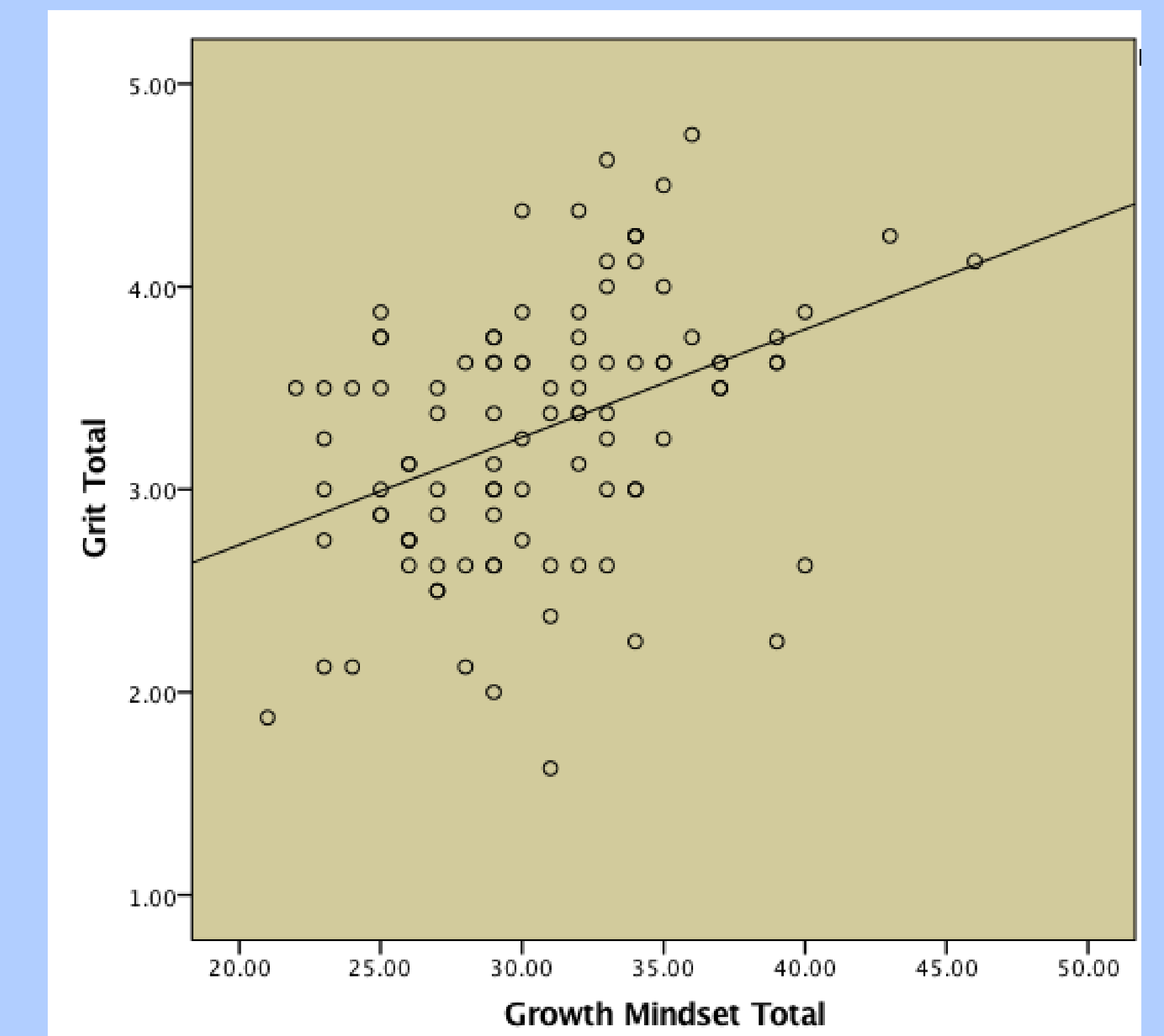
Results

Total Sample	Mean	Standard Deviation
GPA	3.41	0.54
Grades	1.96	0.78
Growth Mindset (Range 8 to 48)	30.64	4.84
Grit	3.29	0.64
Family Stress (Range 17 to 67)	28.84	7.61

References

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Results



- Participants fell within the "intermediate" growth mindset range. That is, on average, they were unsure whether they can change their intelligence. However, they care about their performance and want to learn.
- Overall, participants were on the fairly "gritty" side.
- Grit was positively correlated with growth mindset ($r = .40$, $p < .001$).
- To examine race differences on outcomes, One Way ANOVAs were conducted. To examine gender differences on outcomes, Independent Samples T-test were conducted.
- There were no differences in race and gender on both grit, growth mindset, and family stress.

Discussion

- Our results contradict our hypotheses that students' life challenges may have lower levels of grit and growth mindset and would have possibly lower GPAs.
- Our results also contradict our hypotheses that higher levels of family stress will be associated with lower grades.
- It is possible that given the students rated higher on the grit scale, that this may have buffered the impact of stress on grades.
- Our small, predominately White and Asian sample may contribute to the above contradictions.
- Future research should examine the correlation between GPA and number of credits taken per quarter.
- Overall, there is correlation between grit, growth mindset; and we hope further study will give us better insights for possible ways to replicate grittiness in more students.

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