



AP RESEARCH PROJECT

RIGOROUS COLLEGE-LEVEL COURSE REQUIREMENTS ON MENTAL HEALTH AND ACADEMIC PERFORMANCE



LITERATURE REVIEW

“ ”

"They find themselves facing non-stop workloads, excessive learning outside of class hours, and preparing for end-of-course exams on top of the numerous environmental stressors."

- Suldo et al.

Suldo, S. M., Shaunessy, E., Thalji, A., Michalowski, J., & Shaffer, E. (2009). Sources of stress for students in high school college preparatory and general education programs: group differences and associations with adjustment. *Adolescence*, 44(176).



FORCED CHOICE DILEMMA

Academic Life vs. Social Life

Psychological Stressors

"With the need to facilitate learning in correspondence to the pace of the curriculum, AP students tend to suffer from too many demands on their time and attention."

- FOUST ET AL.

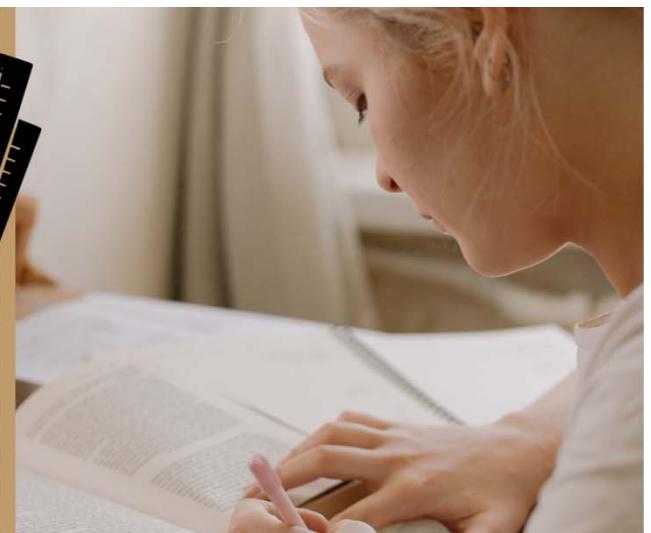
Social Stressors

"AP students did not consider academic success a choice" and despite challenges, they pursued the need of having it all.

- SHAUNESSY ET AL.

Foust, R. C., Hertberg-Davis, H., & Callahan, C. M. (2008). "Having it All" at Sleep's Expense: The Forced Choice of Participants in Advanced Placement Courses and International Baccalaureate Programs. *Roeper Review*, 30(2), 121-129.

Shaunessy, E., Suldo, S. M., Hardesty, R. B., & Shaffer, E. J. (2006). School functioning and psychological well-being of international baccalaureate and general education students a preliminary examination. *Journal of Secondary Gifted Education*, 17(2), 76-89.





HAVING IT
ALL
EST. 1955

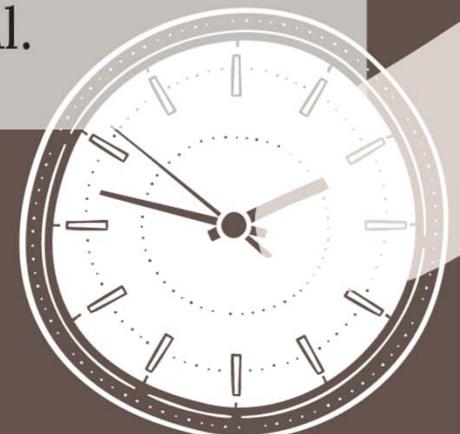
S A C R I F I C E
**to maintain a normal life on top of
academic pursuit**

- Howell Et Al.

**RIGIDITY OF COURSE
REQUIREMENTS:**

Sleep Deprivation, Social-Emotional
Outcomes, Cognitive Withdrawal, Fatigue,
Distress, and Stress

Howell, A. J., Jahrig, J. C., & Powell, R. A. (2004). Sleep quality, sleep propensity
and academic performance. *Perceptual and motor skills*, 99(2), 525-535.



RESEARCH GAP



Location

1 Large Urban High School



Environment

Minimize Excessive Variation of Acting Factors on Students



Participants

Account for Experience Differences Between 9th to 12th Graders

RESEARCH QUESTION

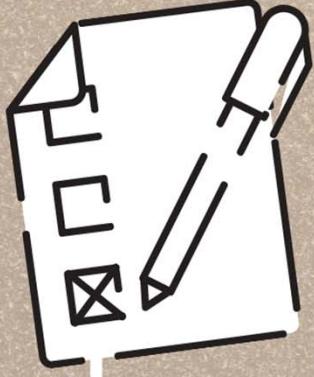
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How do the requirements of rigorous college-level programs impact AP students' mental health and reflect on their academic performance from 2018-2022?

HYPOTHESIS

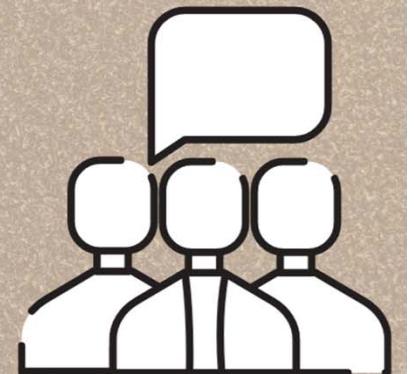
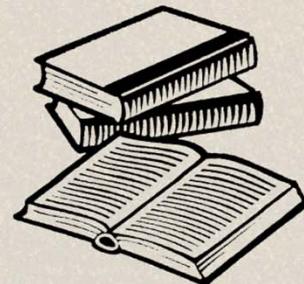
The greater the accumulation of AP courses and their requirements students held, the more frequent negative factors of mental health in terms of physical and cognitive functioning would be present within the population.

The most prevalent factor would be Sleep Deprivation resulting in academic performance deterioration.



CORRELATIONAL RESEARCH

Mixed Methodology Approach





QUANTITATIVE DATA - SURVEY

IN THE LAST MONTH, HOW OFTEN HAVE YOU...	NEVER (0)	RARELY (1)	SOMETIMES (2)	FAIRLY OFTEN (3)	VERY OFTEN (4)
FELT THAT YOU WERE ON TOP OF THINGS?		X			
FELT NERVOUS AND STRESSED?					X
STAYED UP LATE TO STUDY?			X		
FELT OVERWHELMED BY COURSE-LOAD?				X	
FEARED FAILURE?	X				

PERCEIVED STRESS RATING

- 30 multiple choice questions
- Scored based on 5-point Perceived Stress Rating Scale
- 4 points - Very Often
- 3 points - Fairly Often
- 2 points - Sometimes
- 1 point - Rarely
- 0 points - Never
- Captures stress levels and extent of overload

SCORED BETWEEN 0-120 POINTS

A HIGHER SCORE REFLECTS HIGHER PERCEIVED STRESS



QUANTITATIVE DATA - SURVEY

I CAN...	STRONGLY DISAGREE (1)	DISAGREE (2)	AGREE (3)	STRONGLY AGREE (4)
ALWAYS SOLVE MY PROBLEMS IF I TRY HARD ENOUGH		X		
REMAIN CALM WHEN FACING DIFFICULTIES			X	
STICK TO MY AIMS AND ACCOMPLISH MY GOALS	X			
CONFIDENTLY DEAL WITH UNEXPECTED EVENTS				X
FIND SEVERAL SOLUTIONS TO PROBLEMS			X	

SELF-EFFICACY RATING

- 10 multiple choice questions
- Scored based on 4-point Self-Efficacy Rating Scale
- 4 points - Strongly Agree
- 3 points - Agree
- 2 points - Disagree
- 1 point - Strongly Disagree
- Identifies perceived ability to succeed in school and correlated towards emotion, optimism, and work satisfaction

SCORED BETWEEN 10-40 POINTS

A HIGHER SCORE REFLECTS HIGHER SELF-EFFICACY



QUANTITATIVE DATA - SURVEY

ROUGHLY HOW OFTEN DO YOU...	NEVER	RARELY	SOMETIMES	OFTEN	ALMOST ALWAYS
FIND YOURSELF COMPLETING BUSY WORK?					X
HOW MANY HOURS DO YOU SPEND...	0-1 HOURS	2-3 HOURS	4-5 HOURS	6-7 HOURS	8+ HOURS
COMPLETING HOMEWORK PER DAY				X	
ROUGHLY HOW MANY HOURS	1-2 HOURS	3-4 HOURS	5-6 HOURS	7-8 HOURS	9+ HOURS
DO YOU SLEEP PER DAY?		X			

PERSONAL EXPERIENCE REPORT

- 14 questions
- Multiple choice, check all that apply, fill in, etc.
- Analyze frequency amongst factors concerning mental health
- Identifies trends amongst mindsets and approaches towards academics

TRENDS AND RECURRING FACTORS



QUALITATIVE DATA - INTERVIEW

OPEN-ENDED QUESTIONS:

When you are overwhelmed with schedules and assignments, what is the first thing you choose to sacrifice?

Do you think your mental health has been impacted being involved in AP programs? Have they affected your academic performance?

There is something called the Forced Choice Dilemma. It is the belief where students feel they must choose between their academic life vs. their social life. Do you experience this?

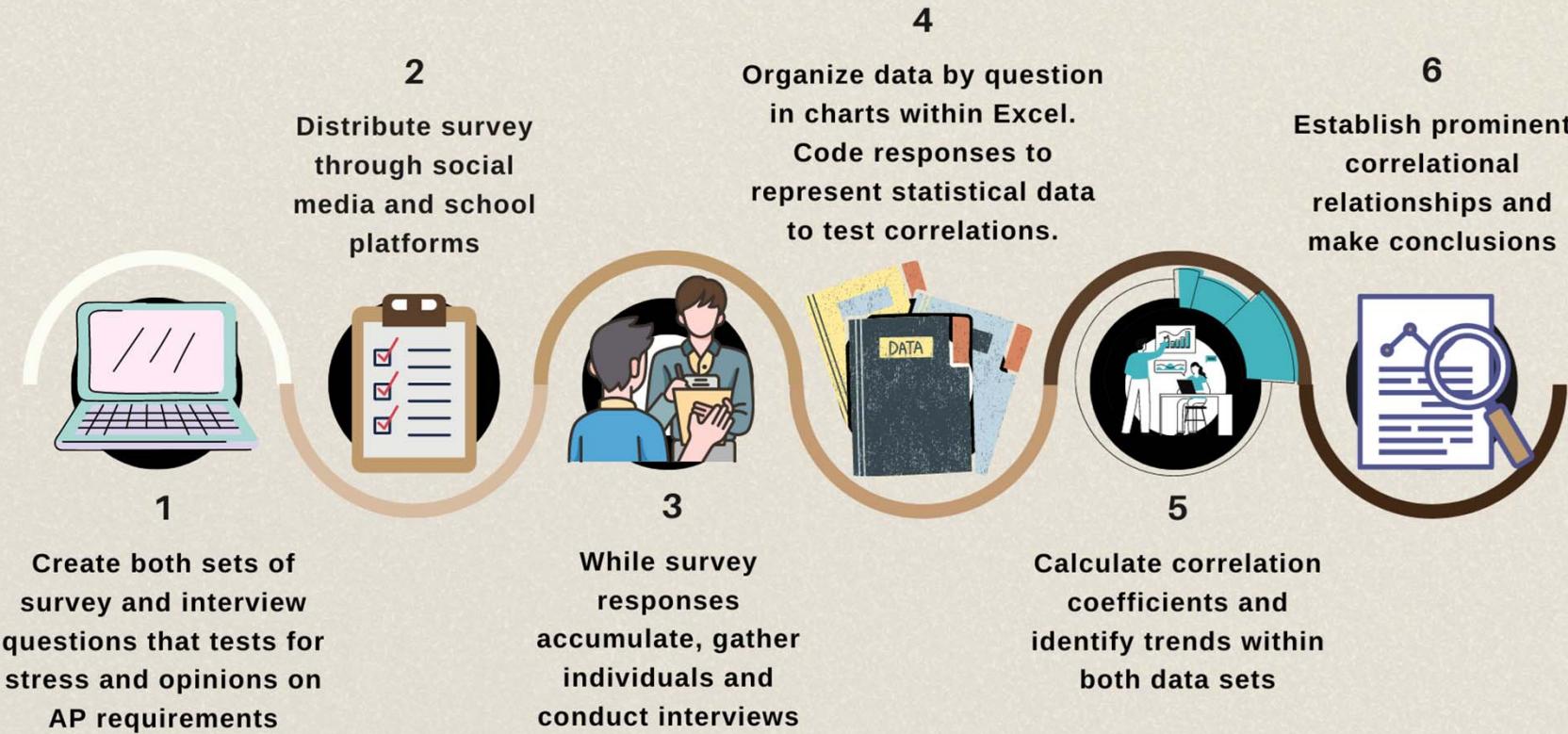
FACE-TO-FACE INTERVIEW

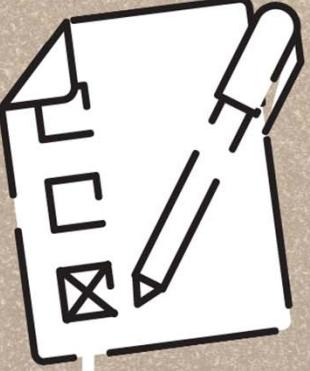
- 8 open-ended questions
- Didn't disregard emotion nor personal opinion
- Environment that promotes free expression
- Limitations of Surveys compared to Interviews
- Senior Population more sought after
- Highlights commonality in mental health responses and factors
- Identifies recurring mindset within participants

AUDIO RECORDED AND
TRANSCRIBED

TO PREVENT MISTRANSITION OF
VIEWS FROM SPEECH TO PAPER

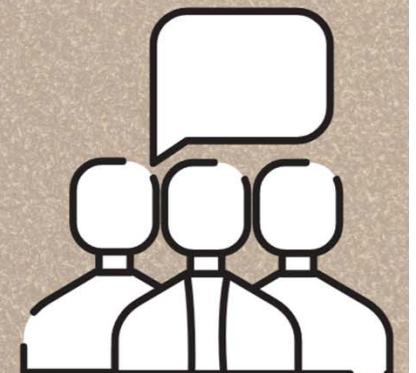
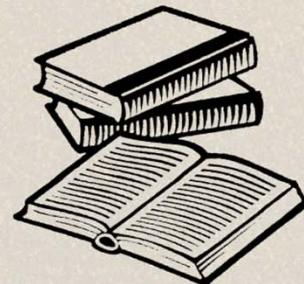
APPLICATION





RESULTS AND DISCUSSION

**Mental Health and Academic
Performance**





Survey Data Overview

41 OUT OF 57 PARTICIPANTS



**72% IN THE
MOST
RIGOROUS
LEARNING
PROGRAM**

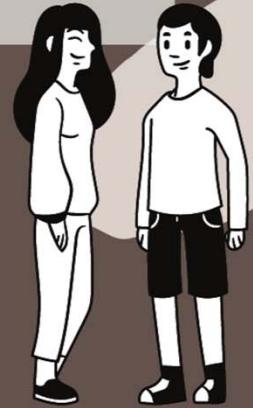


**50
STUDENTS
(87%)**

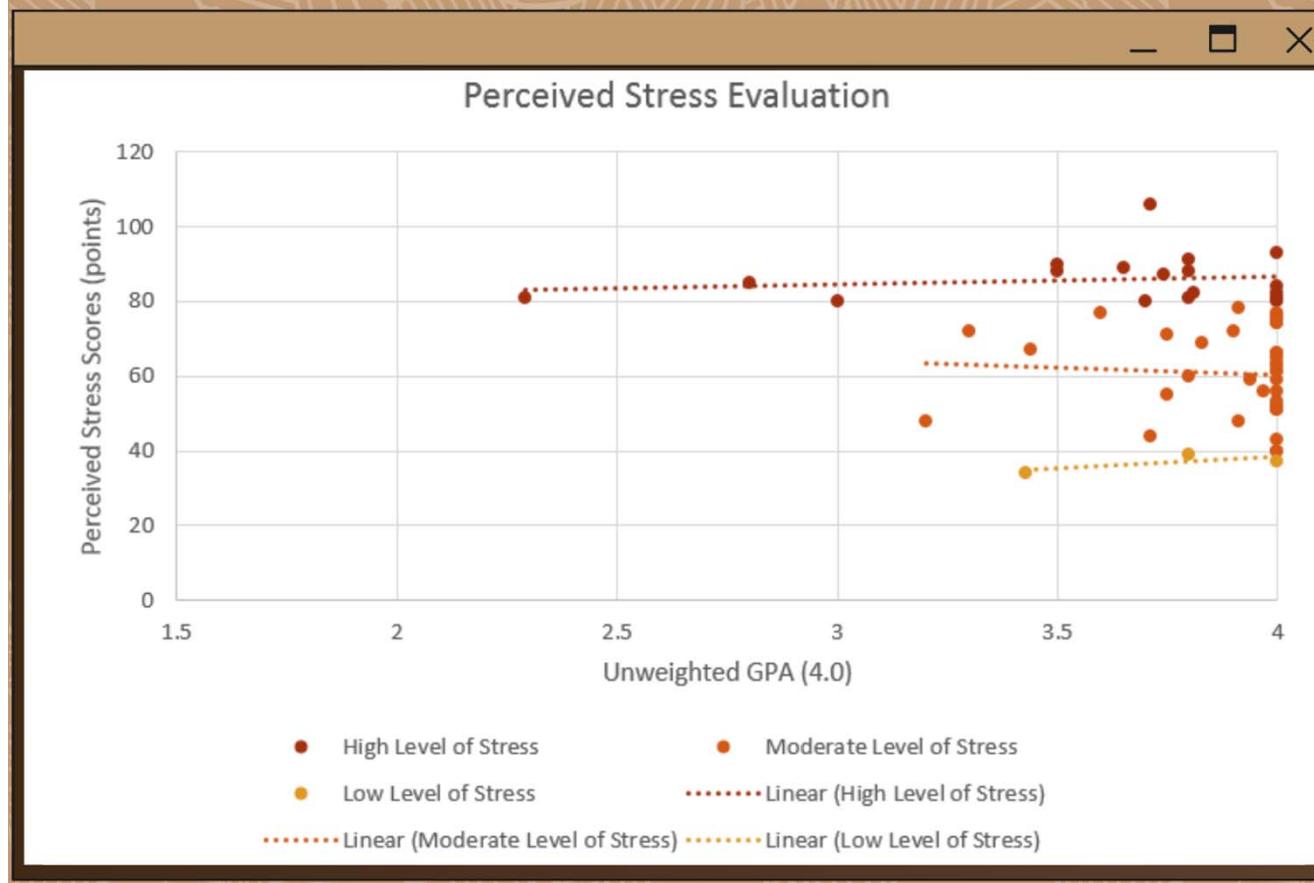
**3.5 GPA OR
HIGHER**

PERFORMANCE

GPA was taken at the end of the first semester to ensure assignments and exams were accumulated; to reflect students' academic performance



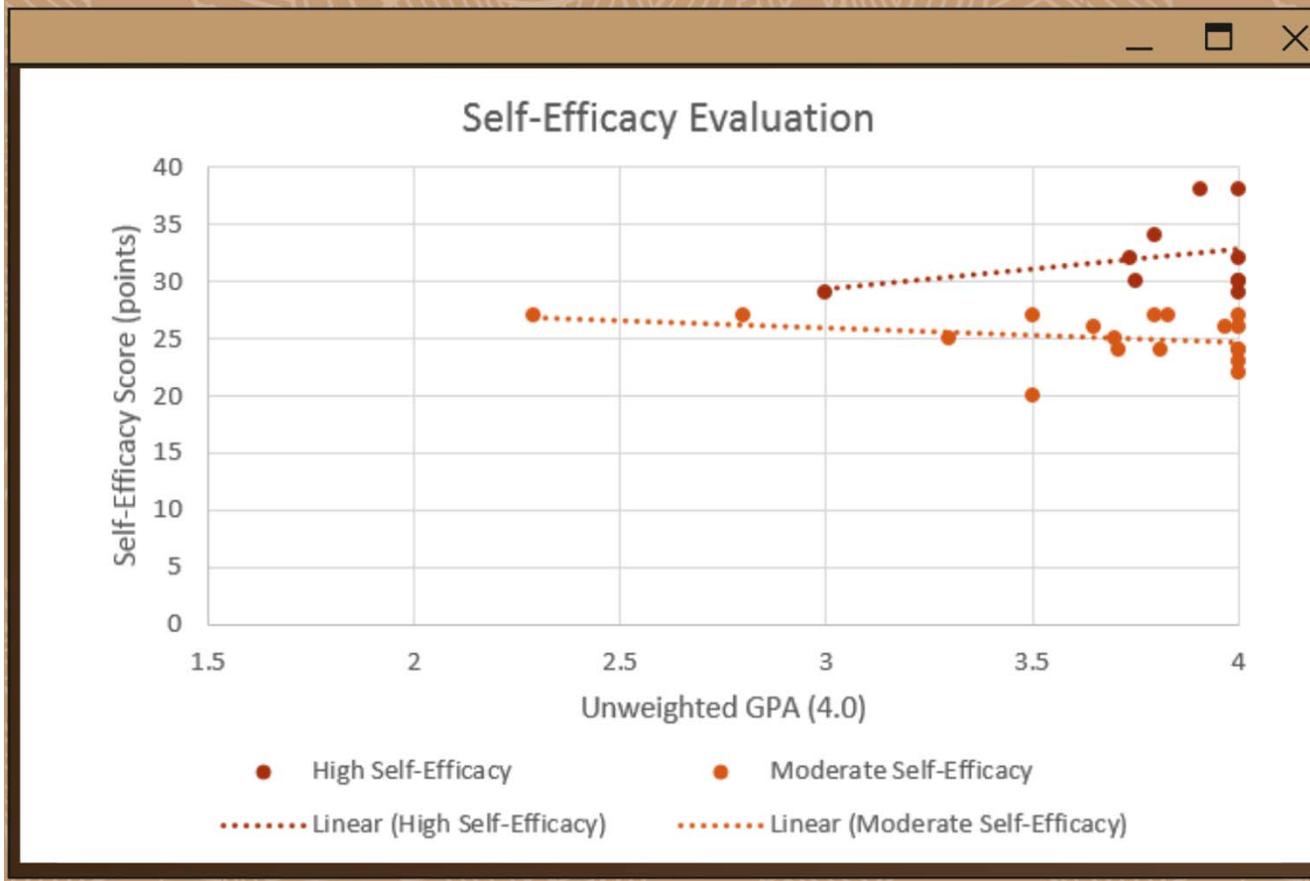
CC: -0.23322



- 31.5% High Perceived Stress
- 63.5% Moderate Perceived Stress
- 5% Low Perceived Stress

Weak Negative Correlation: Stress rises, academic performance drops and vice versa

CC: 0.196529



- 38.6% Moderate Self-Efficacy
- 61.4% High Self-Efficacy
- Relatively no relationship

Weak Positive Correlation: Academic Performance and Self-Efficacy tend to move in the same direction

NO SIGNIFICANT CORRELATION

-0.14504

*GPA (academic performance) and
hours for homework completion per
day*

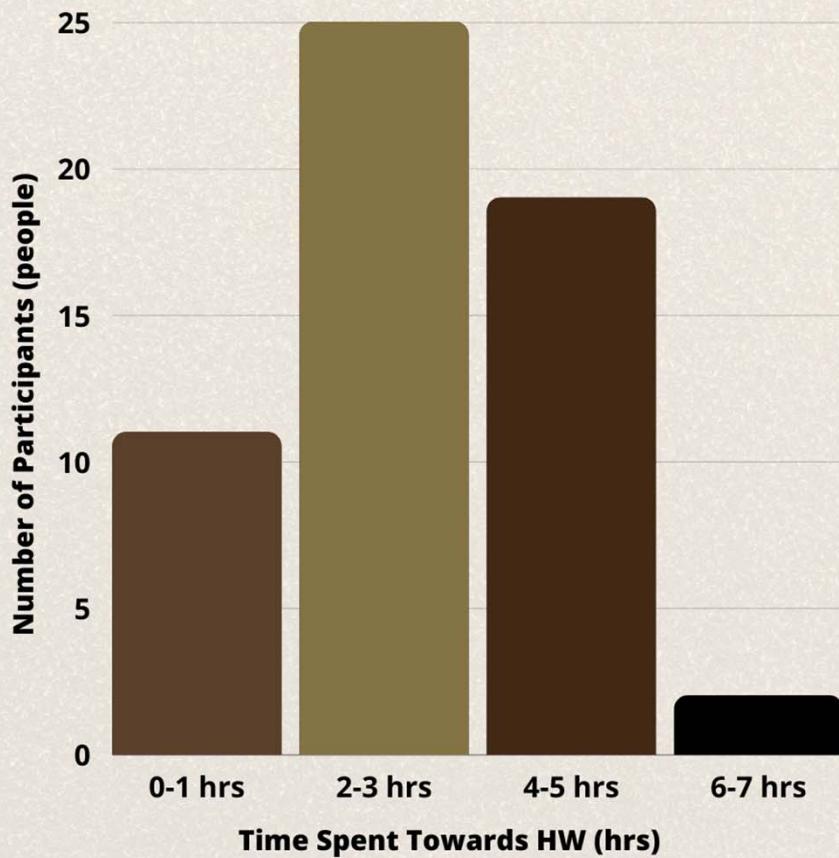
0.14397

*GPA (academic performance) and
average hours of sleep per night*

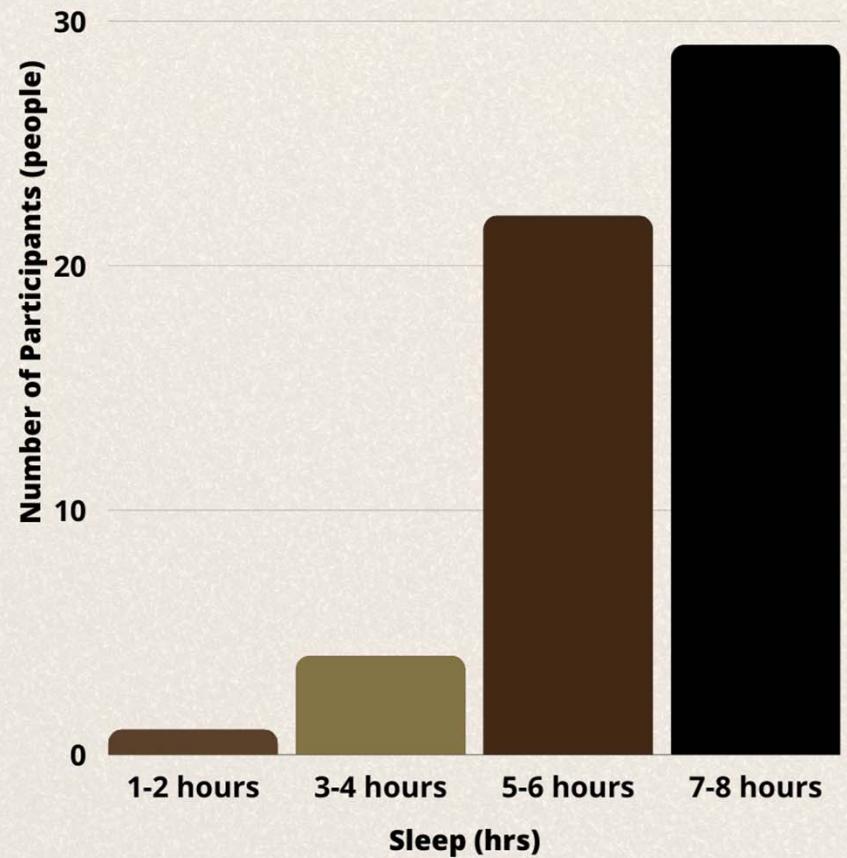


HW AND SLEEP: -0.28105

Average HW Completion Time



Average Daily Sleep





EXTRACURRICULARS

100%

of both interviewees and survey participants were involved in some form of extracurricular

Student Athletes

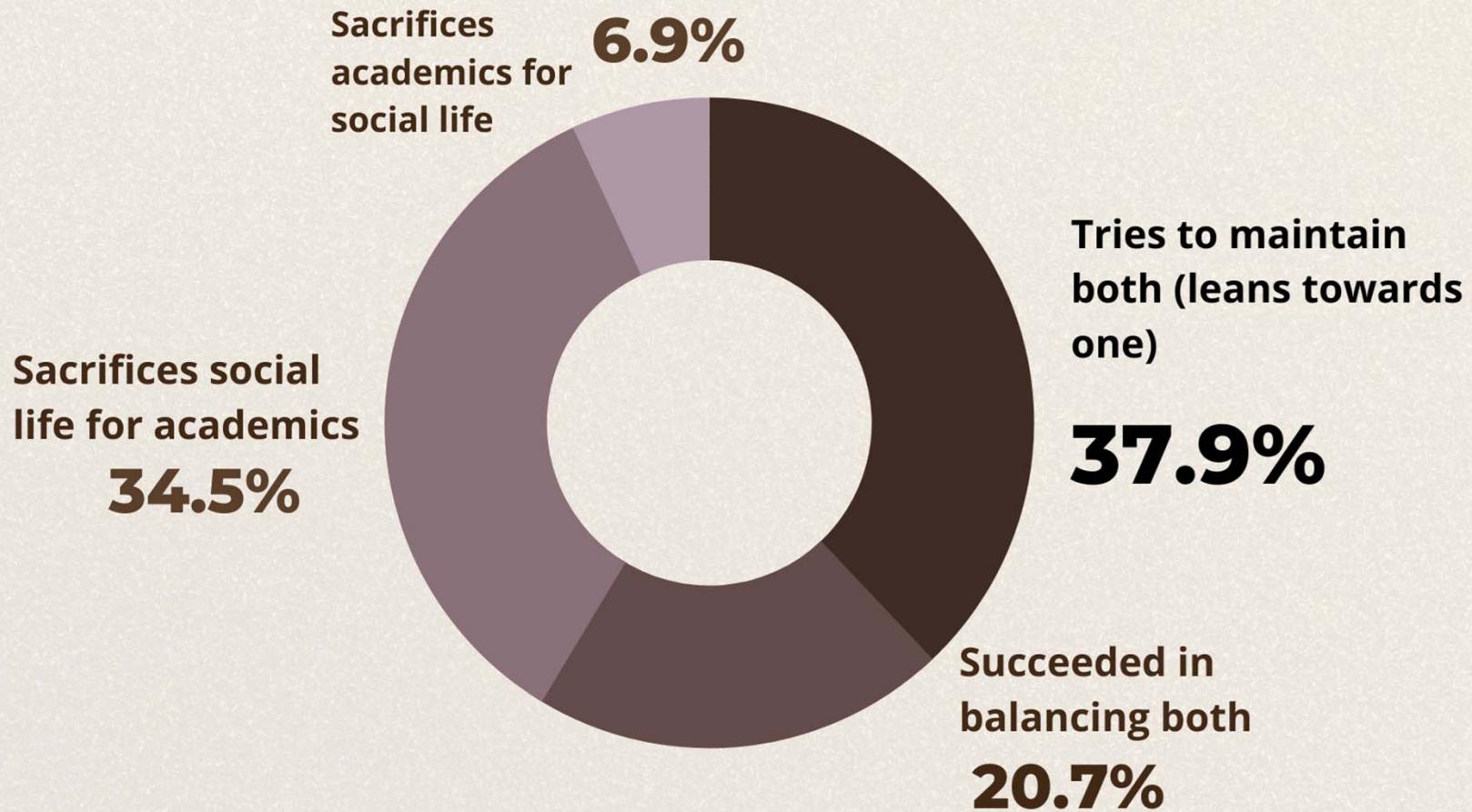
Ages 13-18 should be sleep 8-10 hours per night and for student athletes in particular, to attain optimum cognitive and active performance, they need 9-11 hours of sleep per night."

- THE AMERICAN ACADEMY OF
SLEEP MEDICINE

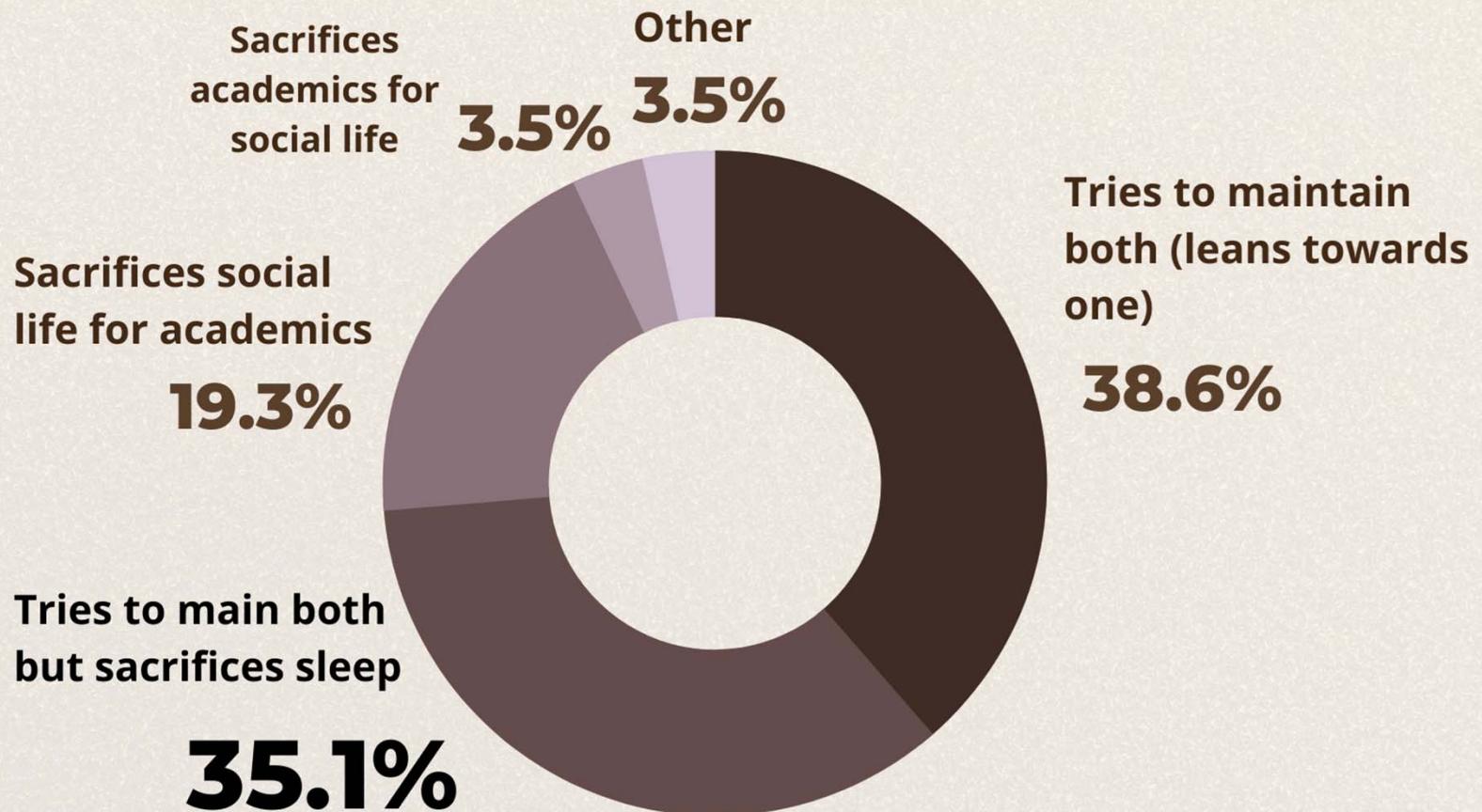
WHEATON, A. G., JONES, S. E., COOPER, A. C., & CROFT, J. B. (2018). SHORT SLEEP DURATION AMONG MIDDLE SCHOOL AND HIGH SCHOOL STUDENTS - UNITED STATES, 2015. MMWR: MORBIDITY & MORTALITY WEEKLY REPORT, 67(3), 85–90. [HTTPS://DOI.ORG/10.15585/MMWR.MM6703A1](https://doi.org/10.15585/mmwr.mm6703a1)



FORCED CHOICE DILEMMA PROMINENCE INTERVIEW RESPONSES

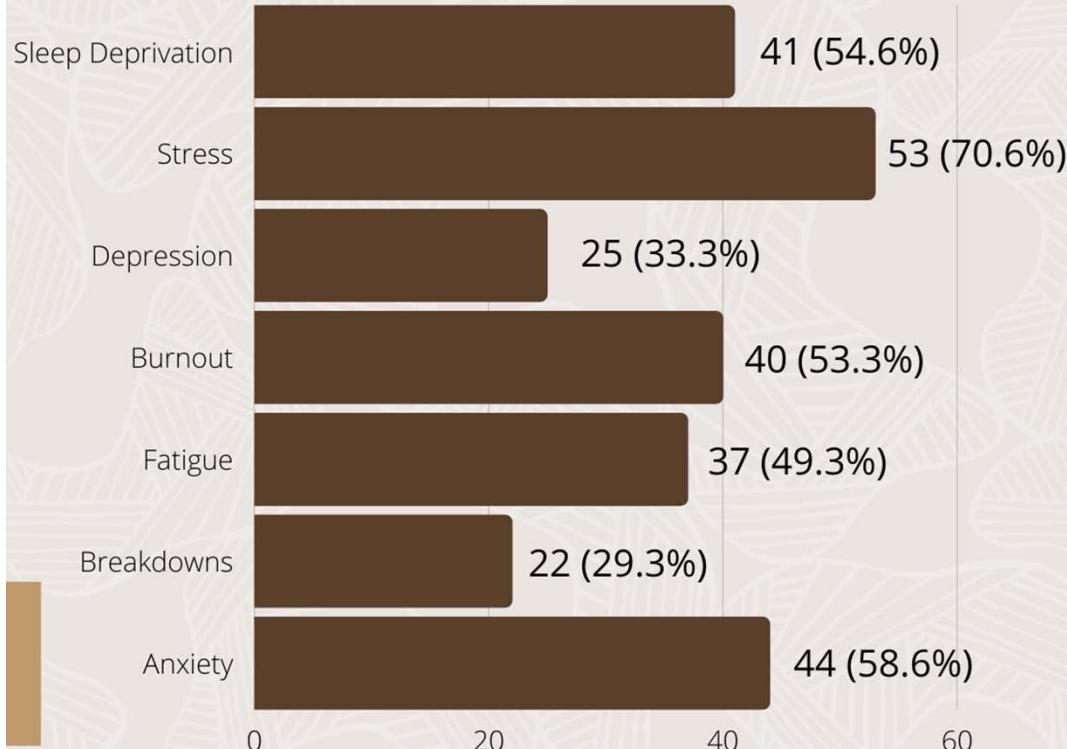


FORCED CHOICE DILEMMA PROMINENCE SURVEY RESPONSES





PROMINENCE OF DISCREPANCIES



MENTAL HEALTH FACTORS

Present in more than 50% of participants' reports:

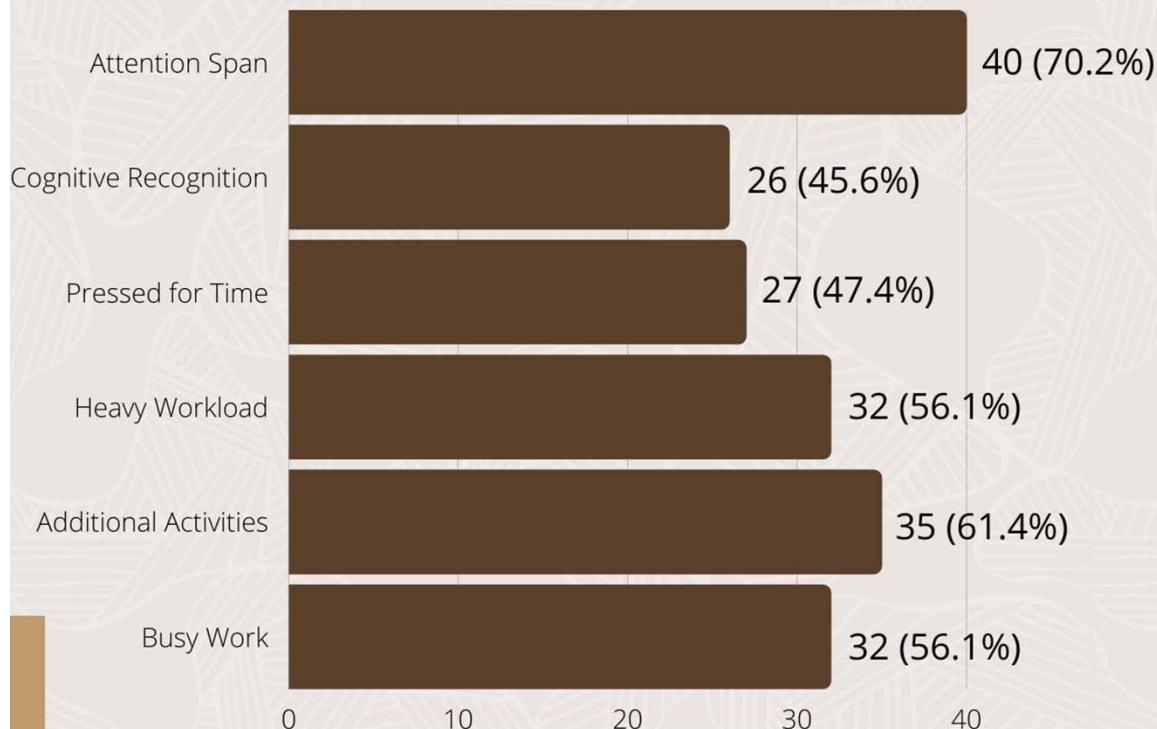
- Sleep Deprivation
- Burnout
- Anxiety

70.6% reported problems with

STRESS



PROMINENCE OF DISCREPANCIES



ACADEMIC FUNCTIONING

Present in more than 50% of participants' reports, academic struggles were attributed to:

- Heavy Workloads
- Additional Activities
- Busy Work

70.2% reported problems with

ATTENTION SPAN



SURVEY AND INTERVIEW SHARED MINDSET

Utilize time in class to teach course material



Homework that's meant to facilitate learned skills in class and not for learning new concepts



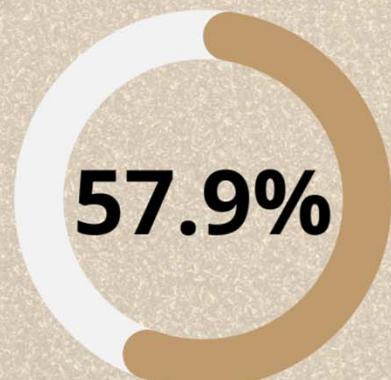
CHANGE
LEARNING
SPEED

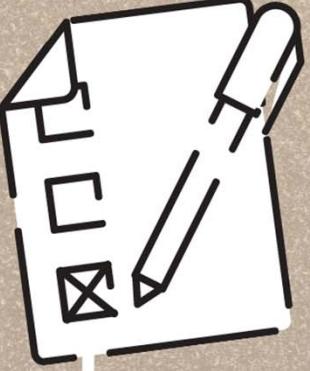
←
REASONABLE
TIME OUTSIDE
OF SCHOOL
HOURS

Reduction of busy work assignments



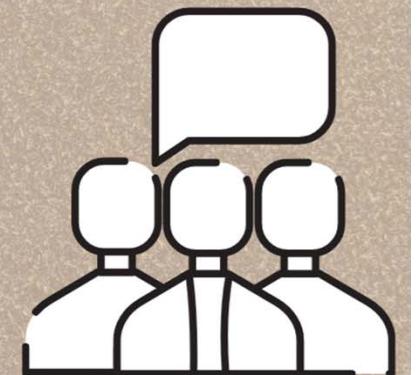
Linger longer on concepts, if not provide flexibility to assignment due dates





CONCLUSION/ FUTURE IMPLICATIONS

Limitations



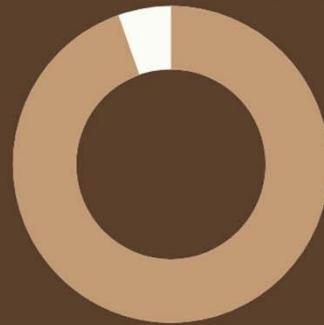


MENTAL HEALTH ON ACADEMIC PERFORMANCE

"This isn't a call to change all the requirements, but instead a call to change the structure of AP teaching approaches"

- SENIOR INTERVIEWEE

94.6%
MENTIONED



**77.8% REPORTED
MINIMAL IMPACT ON
THEIR ACADEMIC
PERFORMANCE**

Participants chose to sacrifice their mental health in order to achieve academic success.

A POSSIBLE MATTER OF

**CAUSATION OVER
CORRELATION**

"It's a small price to pay for a greater reward of academic achievement."

- SENIOR INTERVIEWEE



REQUIREMENTS ON MENTAL HEALTH AND ACADEMIC PERFORMANCE

LIMITATIONS

01

PARTICIPANT
DATA SIZE

02

QUESTION
PHRASING AND
BIAS

03

HONEST AND
TRUTHFUL
RESPONSES





PROMOTE GROWTH INSTEAD OF DECAY

FUTURE IMPLICATIONS

- Redrawing learning schedules to fit within class times
 - Holding meetings prior to the school year to discuss homework and class schedules to prevent overload and overlap
 - Meetings to understand student circumstances in school and outside of school
 - Understanding value besides test scores
-
- To see whether factors are prominent outside of this large urban high school, conduct study at another high school in a different geographical location to see if the factors are prominent there as well

Manipulate the time spent towards teaching course material outside of school hours to allow:

- Better engagement and functioning within designated class times
- Benefits students, teachers, schools, and AP programs



AP RESEARCH PROJECT

**REDUCE THE IMPACT ON STUDENTS' MENTAL HEALTH AND PREPARE
THEM FOR THE TRANSITION INTO THE COLLEGE SETTING AND WORK
ENVIRONMENT**



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