

## Background

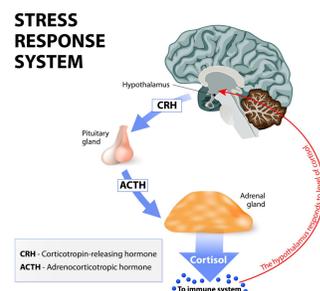
Among university students, lower perceived stress and higher self-esteem was associated with academic adjustment over time (Friedlander et al., 2007)

- Participants who perceive their stress to be lower felt better about themselves over time to the extent that their perceptions were accurate (Friedlander et al., 2007)

Physiological stress may also be associated with academics. Students who reported higher stress and had higher cortisol levels before an examination tended to have significantly lower scores (Vivian, David, and Chia, 2003)

- The steroid cortisol is a hormone released by adrenal cortex and fluctuates in response to acute and chronic stressors.

- Operates on a negative feedback loop between the hypothalamus, anterior pituitary gland, and adrenal cortex release of cortisol



- Cortisol levels change in response to acute environmental stressors; change between baseline cortisol and post-stressor cortisol = stress reactivity.

Previous research found a positive relationship between self-esteem and academic performance, (Mohammad Aryana, 2010).

- Self-esteem is a person's overall assessment of self-worth, and can be general or related to a specific dimension.

- *Performance self-esteem* is a person's assessment of how compare their performance on tasks in comparison to others

## Research Question

How does *performance self-esteem* and stress (self reported, baseline cortisol, and stress reactivity) predict academic performance?

## Method

### Participants

- N = 76 University of Dayton undergraduates
- Recruited from introductory psychology courses and received credit in exchange for participation

### Procedure

- Longitudinal design: approximately one-month between Time 1 and Time 2 assessments
- Time 1 procedure:

	Pre-Stressor Task					Stressor Task			Post-Stressor Task										
Time 1	Complete Questionnaires					Saliva Sample #1	Acclimation	Preparation	Speech	Arithmetic	Complete Questionnaires	Saliva Sample #2	Complete Questionnaires	Stressor Task Debrief					
Minute	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90

- Time 2: Participants only complete the questionnaires from Time 1 and provide baseline saliva sample

### Self-Esteem

- Performance Self-Esteem: State Self-Esteem Scale (Heatherton & Polivy, 1991)

### Stress

- Self-reported stress: Perceived Stress Scale (Cohen, Kamarck, and Mermelstein, 1983)
- Physiological stress: baseline cortisol (Saliva Sample #1) and stress reactivity (Sample #2 cortisol – Sample #1 cortisol)

### Academic Performance

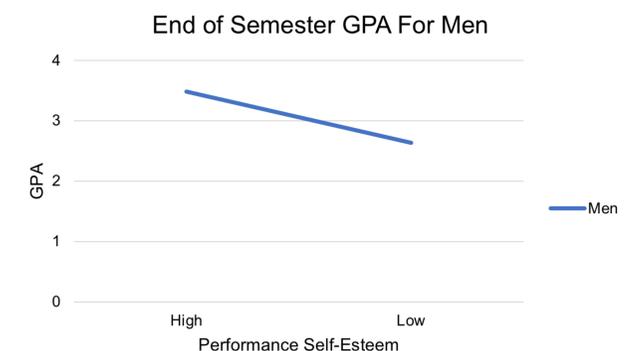
- Participant's actual Grade Point Average (GPA) at the end of the semester

## Results

*Perceived Stress:* The effects of perceived stress and performance self-esteem on GPA varied by sex.

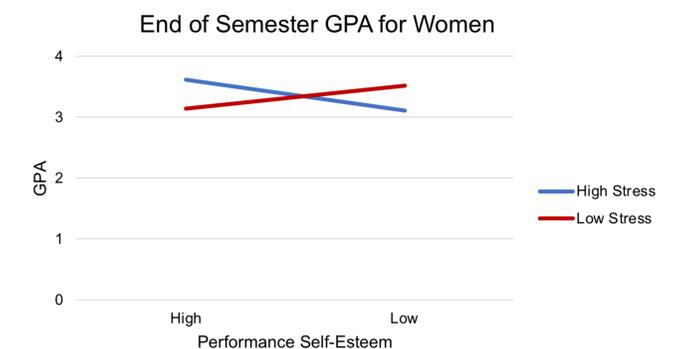
### Men

- Performance self-esteem was positively associated with the end of semester GPA



### Women

- At high stress, self-esteem was associated with a higher end of semester GPA
- At low stress, no association between performance self-esteem and end of semester GPA



### Physiological Stress

- No association between physiological stress/ reactivity and end of semester GPA.

## Discussion

- The association between perceived stress and self-esteem on end of semester GPA varied by sex.
- Physiological stress was not associated with GPA and did not interact with performance self-esteem to predict GPA.