

# Better Late Than Never?

## The relationship between adaptive and maladaptive procrastination styles, alcohol use, and academic performance

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### Introduction

- Procrastination is commonly perceived as a failure of self-regulation or a form of self-handicapping and an obstacle to goal attainment (Klassen, Krawchuk, & Rajani, 2008). It has been associated with a variety of negative outcomes, including poor academic performance and substance use.
- Instead of viewing procrastination as a monolithic and uniformly negative behavior, it may be helpful to distinguish between adaptive and maladaptive forms of procrastination.
- Person-centered approaches posit that multiple modes of behavior may exist simultaneously within one person (e.g., someone may engage in both productive and unproductive forms of procrastination simultaneously) and look at how such patterns naturally cluster together at the level of the individual.
- The present study used a person-centered approach to investigate the presence of potentially productive forms of procrastination and compare them with classic unproductive procrastination (e.g., hanging out with friends, watching movies, surfing the web) and non-procrastination.

#### Hypotheses

- Productive forms of procrastination exist and will be associated with positive academic and alcohol outcomes.
- Unproductive procrastination will be associated with negative academic and alcohol outcomes.

### Methods

#### Participants

- 1106 UW undergraduates (654 women, 449 men, 2 transgender, 1 declined to answer).
- Ages 18-25 (Mean age = 20.40,  $SD = 1.60$ ).

#### Procedure

- Participants completed measures online as part of screening for a larger study and were compensated \$15.

#### Measures

- Procrastination style:** The Procrastination Style Questionnaire measured the perceived likelihood of engaging in four behaviors in response to a series of difficult academic task scenarios (see example on left). (Wormington et al., 2011)
- Academic performance:** Current self-reported GPA was used as a measure of academic performance.
- Risk of alcohol disorders:** Alcohol Use Disorders Identification Test (AUDIT; Babor, et al., 2001) assessed behaviors indicative of risk for alcohol disorders
- Alcohol consumption:** Daily Drinking Questionnaire (DDQ; Collins et al., 1985) measured number of drinks typically consumed each day of the week
- Alcohol problems:** Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) asked respondents to estimate the average number of drinks consumed each day of the week in the past 3 months.

*You planned to work on a particular assignment this afternoon but you find that it is going to be much more difficult than expected. Rate the likelihood of each of the following:*

A) Get started on it right away [Non-procrastination]

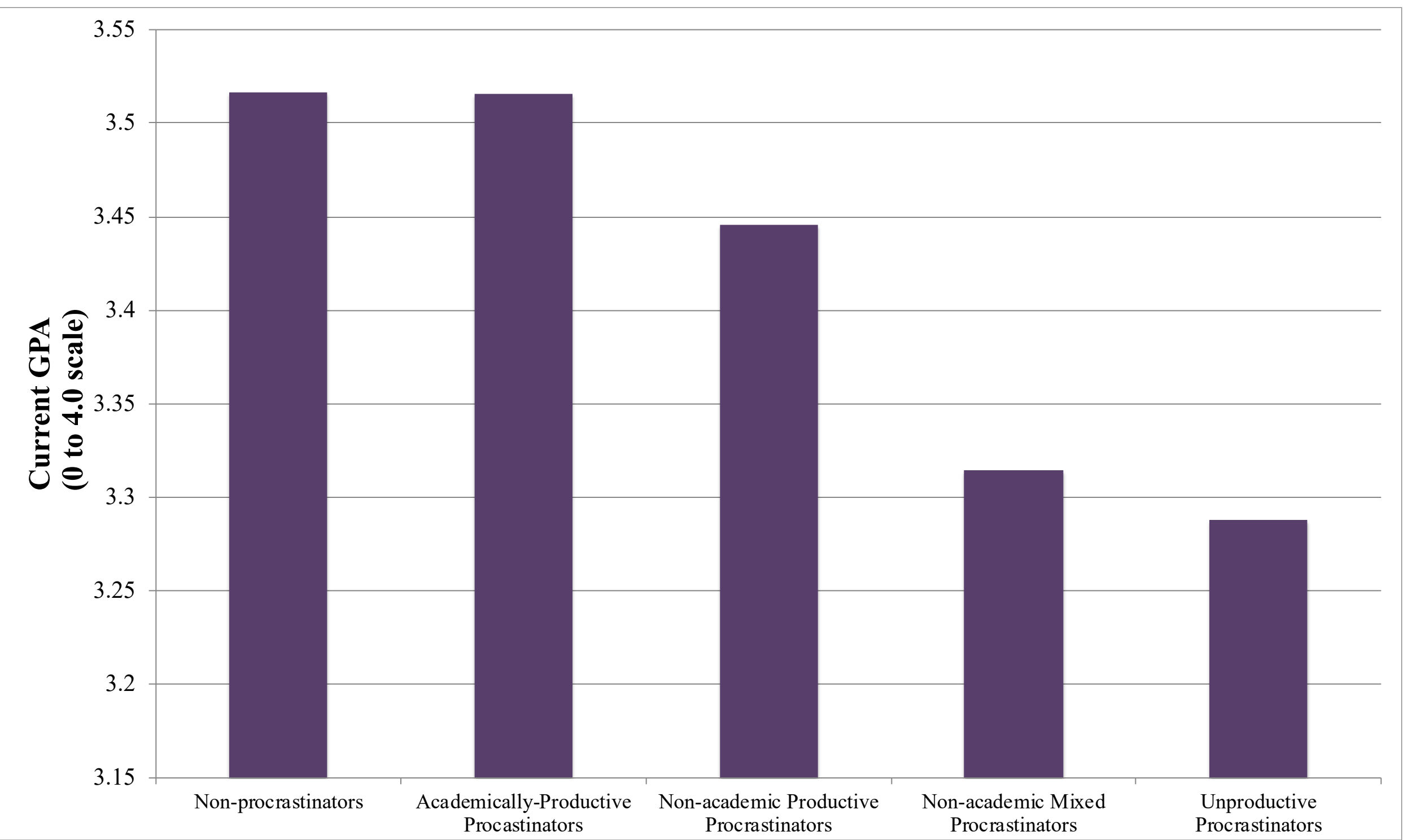
B) First work on an easier task that is due relatively soon [Productive procrastination - academic]

C) First do something non-academic but productive (clean your room, do the dishes, exercise, etc.) [Productive procrastination - non-academic]

D) First do some non-academic, not necessarily productive task (check Facebook, watch television, socialize with friends, etc.) [Classic procrastination]

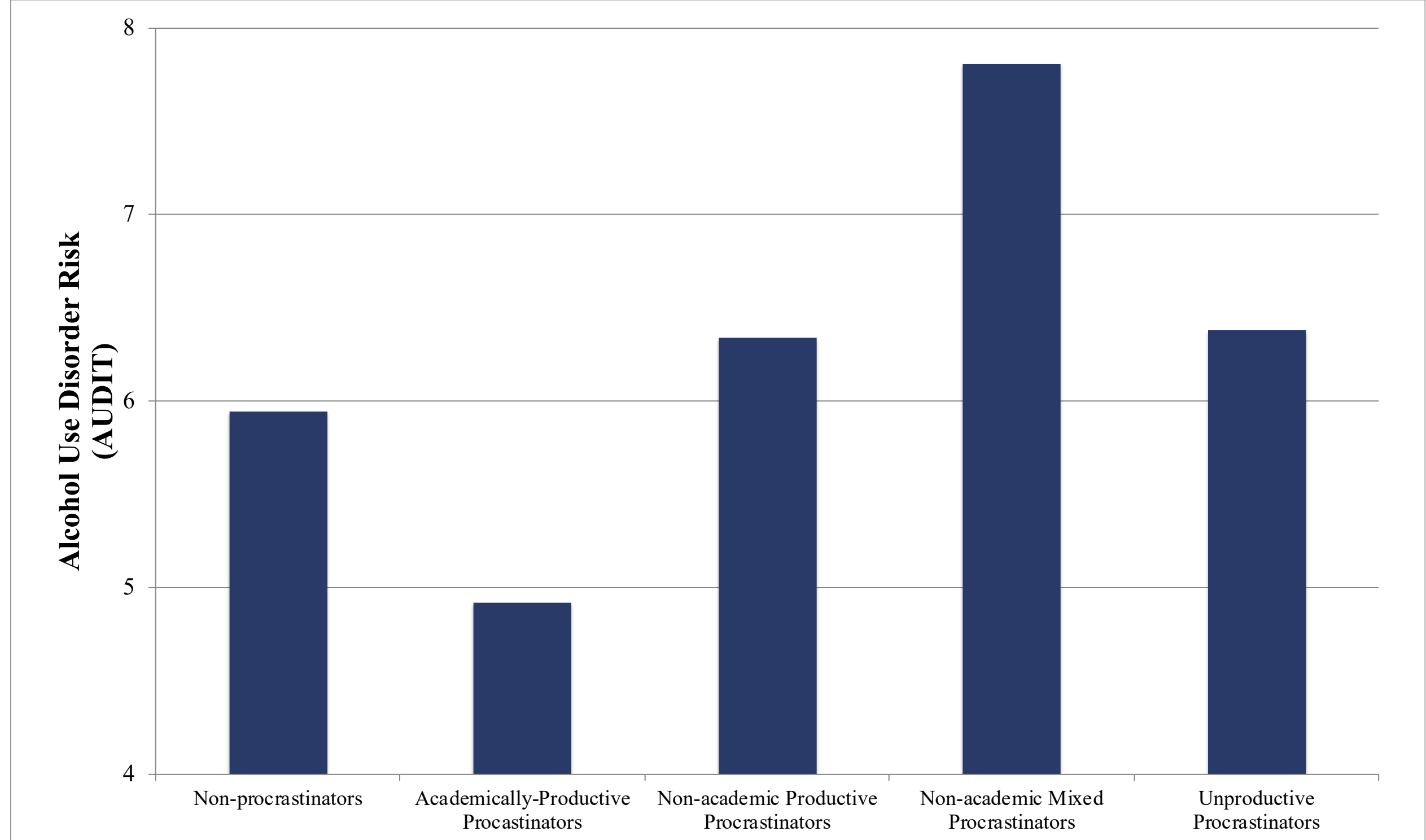
### Results

**Academic Outcome:** Self-reported GPA was lower for unproductive procrastinators ( $p < .001$ ) and non-academic mixed procrastinators ( $p < .001$ ). Academically-productive procrastinators and non-academic productive procrastinators did not differ from non-procrastinators.



**Figure 1.** Self-reported GPA as a function of procrastination style. Analysis of GPA was conducted using one-way ANOVA with post-hoc Tukey tests.

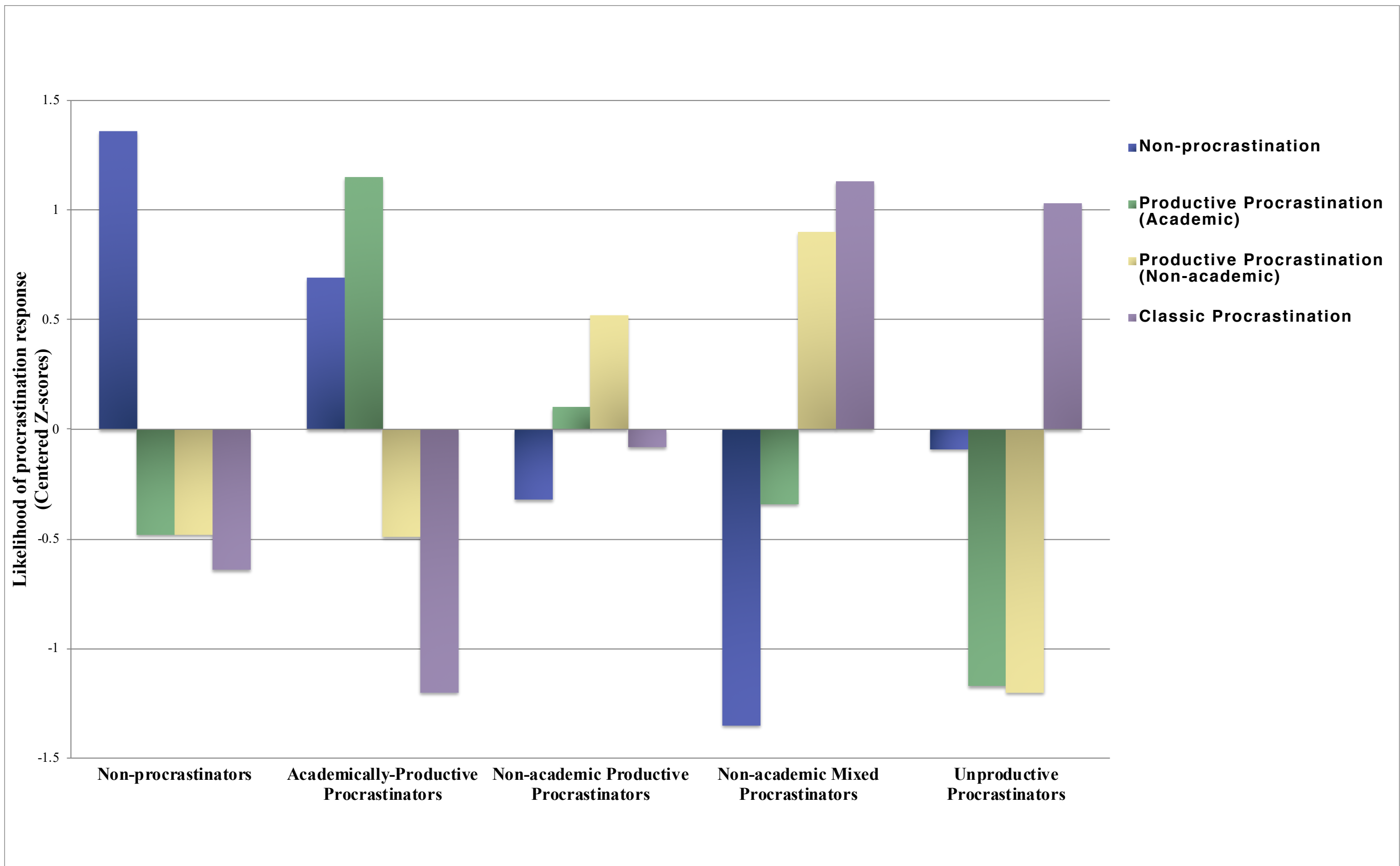
**Alcohol Outcomes:** Non-academic mixed procrastinators reported more alcohol-related problems ( $p < .001$ ) and higher scores on a clinical alcohol screening measure ( $p < .01$ ) than non-procrastinators. Academically-productive procrastinators scored lower ( $p < .05$ ). There was no difference in alcohol consumption. Other procrastination styles did not differ from non-procrastinators in alcohol outcomes.



**Figure 2.** Alcohol use disorder risk (AUDIT) as a function of procrastination style. All alcohol analyses, including alcohol consumption and alcohol problems (not pictured), controlled for gender and were conducted using GzLM and post-hoc T-tests

**Procrastination Styles:** Cluster analysis revealed a five-group solution as the best fit for the data:

1) non-procrastinators, 2) academically productive procrastinators, 3) non-academic productive procrastinators, 4) non-academic mixed procrastinators, and 5) classic unproductive procrastinators.



**Figure 3.** A two-step cluster analysis (Wards followed by k-means) was run to identify naturally-occurring profiles of students who respond to difficult academic situations in similar ways. All data are presented in centered z-scores.

Procrastination Style	Characteristics
1) Non-procrastinators	High in non-procrastination
2) Academically-productive procrastinators	High in productive procrastination (academic domains)
3) Non-academic productive procrastinators	High in productive procrastination (non-academic domains)
4) Non-academic mixed procrastinators	High in productive procrastination (non-academic domains) AND classic procrastination
5) Unproductive procrastinators	High in classic procrastination

### Conclusions

- Instead of viewing procrastination as a uniformly maladaptive behavior, certain styles of procrastination may actually represent successful self-regulatory strategies.
- Procrastination styles characterized by high levels of unproductive “classic” procrastination may be particularly maladaptive
- Procrastination style is associated with alcohol behavior and academic performance. (Fig. 1 and Fig. 2,  $p < .001$ ).
- Not all styles of procrastination are negative: productive procrastinators (both academically-productive and non-academically-productive) exist and did not differ from non-procrastinators in alcohol or academic outcomes.
- Non-academic mixed procrastinators (who exhibit a mix of unproductive procrastination (e.g. “watching television”) and non-academic productive procrastination (e.g., “doing laundry”)) reported more alcohol-related problems ( $p < .001$ ), higher scores on a clinical measure of risk for alcohol use disorders ( $p < .01$ ), and lower GPAs ( $p < .001$ ) than non-procrastinators.
- Unproductive procrastinators also reported lower GPAs than non-procrastinators ( $p < .001$ ).
- Future research might examine the motivational factors associated with certain procrastination styles and the stability of procrastination style over time.



### References

Babor, T.F., Higgins-Biddle, J.C., Saunders, J.B., & Monteiro, M.G. *The Alcohol Use Disorders Identification Test: guidelines for use in primary care*. 2nd Ed. World Health Organization; 2001.

Collins, R. L., Parks, G. A. & Marlatt, G. A. (1985). Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol. *Journal of Consulting and Clinical Psychology*, 53, 189-200.

Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology*, 33, 915-931.

White, H.R. & Labouvie, E.W. (1989). Toward the assessment of adolescent problem drinking. *Journal of Studies on Alcohol*, 50, 30-37.

Wormington, S., Westgate, E., Call, A., Harati, A., Moshontz, H. & Oleson, K. (2011). *A person-centered investigation of academically-productive procrastination: Relations to self-doubt, concern with performance, and mastery-approach goals*. Poster presented at the 11th Annual Meeting of the Society for Personality and Social Psychology, San Antonio, Texas.