

College Alumni Society Grant

INTRODUCTION

- Worry is a cognitive process involving negative, repetitive thoughts that are difficult to control.¹
- People worry in response to stressful events.² However, they also do so in absence of a precipitating event. What could elicit their worry then?
- Perhaps worry functions as a mental habit.^{3, 4}
 - 1. Automatic
 - 2. Repetitive
 - 3. Difficult to control
 - 4. Elicited by any context in which the cognitive process is frequently repeated
- Potential contexts include social isolation⁵, activities with low cognitive load and effort⁶, mood states such as sadness and fatigue⁷, and times of day with greater alone and unstructured time.⁸
- Up to now, mental habits were only studied in the lab.9
- To address this limitation, our study studies worry in the real world.

METHOD

- Sample included 35 students; Age: M = 20.80, SD = 2.90 (see **Table 2** for demographic information).
- Participants completed 6 brief surveys per day for 7 days assessing social isolation, activity characteristics, mood, and thinking patterns.
- Mean levels of worry were averaged across occasions, then correlated with hypothesized context features.

RESULTS

- We found large correlations of worry with negative mood states and moderate correlations with fatigue. Happiness and pride had small correlations with worry levels but were not statistically significant in this sample. (see **Table 1**).
- Worry had small to moderate correlations with activities that required greater attention or physical effort or were more difficult or engaging. However, none of the correlations were statistically significant in this sample. (see **Table 1**).
- Mean worry levels were no higher in evening (6-10 PM) than at other times of day, t = 0.13, p = .896.
- Mean worry levels did not differ across contexts in which individuals were interacting or not interacting, t=1.22, p=.225.

FUTURE DIRECTIONS

- One consideration is to examine the extent to which internal states cue worry or if stress cues internal states and worry. Future studies can conduct experimental research that induces negative internal states to determine whether these states are causing worry to change.
- The College Alumni Society grant is supporting ongoing data collection efforts. We expect a sample size over 70 people by the end of the semester.

Worry as a Habit

Maya Saidi Litvak¹ & Dr. Ayelet Meron Ruscio² COL 2024¹, COL Department of Psychology²



DISCUSSION

- Worry levels tend to be higher as people feel anxious, irritated, sad, or fatigued.
- Despite lacking statistical significance, we observed worry levels tend to be higher when individuals experience a positive affect.
- Although the correlations between activity characteristics and mean worry level did not reach statistical significance in this small sample, it is noteworthy that all correlations were positive, indicating that students reported more worry when engaging in activities that were more demanding, either cognitively or physically.
- Regardless of interacting with others or not and time of day, individuals' mean worry levels tend to be similar.
- Our results suggest a negative and positive internal states and cognitively or physically demanding activities may be a potential context cue for worry.
- Our sample size is modest, which limits statistical power and generalizability.

Table 1: Correlations for Mean Worry

Variable	Pearson r	P-value	
I. Internal State			
Anxious	0.83	<.001	
Irritated	0.74	<.001	
Sad	0.72	<.001	
Tired	0.35	.034	
Нарру	0.17	.309	
Proud	0.23	.202	
II. Activity Characteristics			
Attention	0.23	.180	
Physical Effort	0.12	.486	
Difficulty	0.26	.132	
Engagement	0.18	.298	

Table 2: Demographic Information

Demographics	Percentage
I. Race	
Asian/Pacific	
Islander	54%
White	29%
Black/African	
American	14%
Other	3%
II. Ethnicity	
Not Hispanic	91%
Hispanic	9%

REFERENCES

- 1. Borkovec, T. D., Wilkinson, L., Folensbee, R., & Lerman, C. (1983). Stimulus control applications to the treatment of worry *21*(3), 247-251.
- 2. Hirsch, C. R., & Mathews, A. (2012). A cognitive model of pathological worry. *Behaviour Research and Therapy*, *50*(10), 636–646.
- 3. Colvin, E., Gardner, B., Labelle, P. R., & Santor, D. (2021). The Automaticity of Positive and Negative Thinking: A Scoping Review of Mental Habits. *Cognitive Therapy and Research*, *45*(6), 1037-1063.

 4. Watkins, E. R., & Roberts, H. (2020). Reflecting on rumination: Consequences, causes, mechanisms and treatment of rumination. *Behaviour Research and Therapy*, *127*, 103573.
- 5. Ji, M. F., & Wood, W. (2007). Purchase and consumption habits: Not necessarily what you intend. *Journal of Consumer Psychology, 17*(4), 261–276.
- 6. Mazar, A., & Wood, W. (2022). Illusory Feelings, Elusive Habits: People Overlook Habits in Explanations of Behavior. *Psychological Science*, *33*(4), 563-578.
- 7. Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking Rumination. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science, 3*(5), 400–424. 8. Watkins, E. R., & Nolen-Hoeksema, S. (2014). A habit-goal framework of depressive rumination. *Journal of Abnormal Psychology, 123*(1), 24–34.
- 9. Ruscio, A. M., & Friedman, J. B. (2023). Cognitive responses to habit cues, personally relevant neutral cues, and standardized neutral cues presented in the laboratory
- [Unpublished manuscript]. Department of Psychology, University of Pennsylvania. 10. Wood, W., & Quinn, J. M. (2005). Habits and the structure of motivation in everyday life. In J. P. Forgas, K. D. Williams, & S. M. Laham (Eds.), *Social Motivation: Conscious and Unconscious Processes* (pp. 55–70). Cambridge University Press.