

The Relationship Between COVID-19 and Repetitive Thoughts on Anxiety and Sleep in Undergraduates

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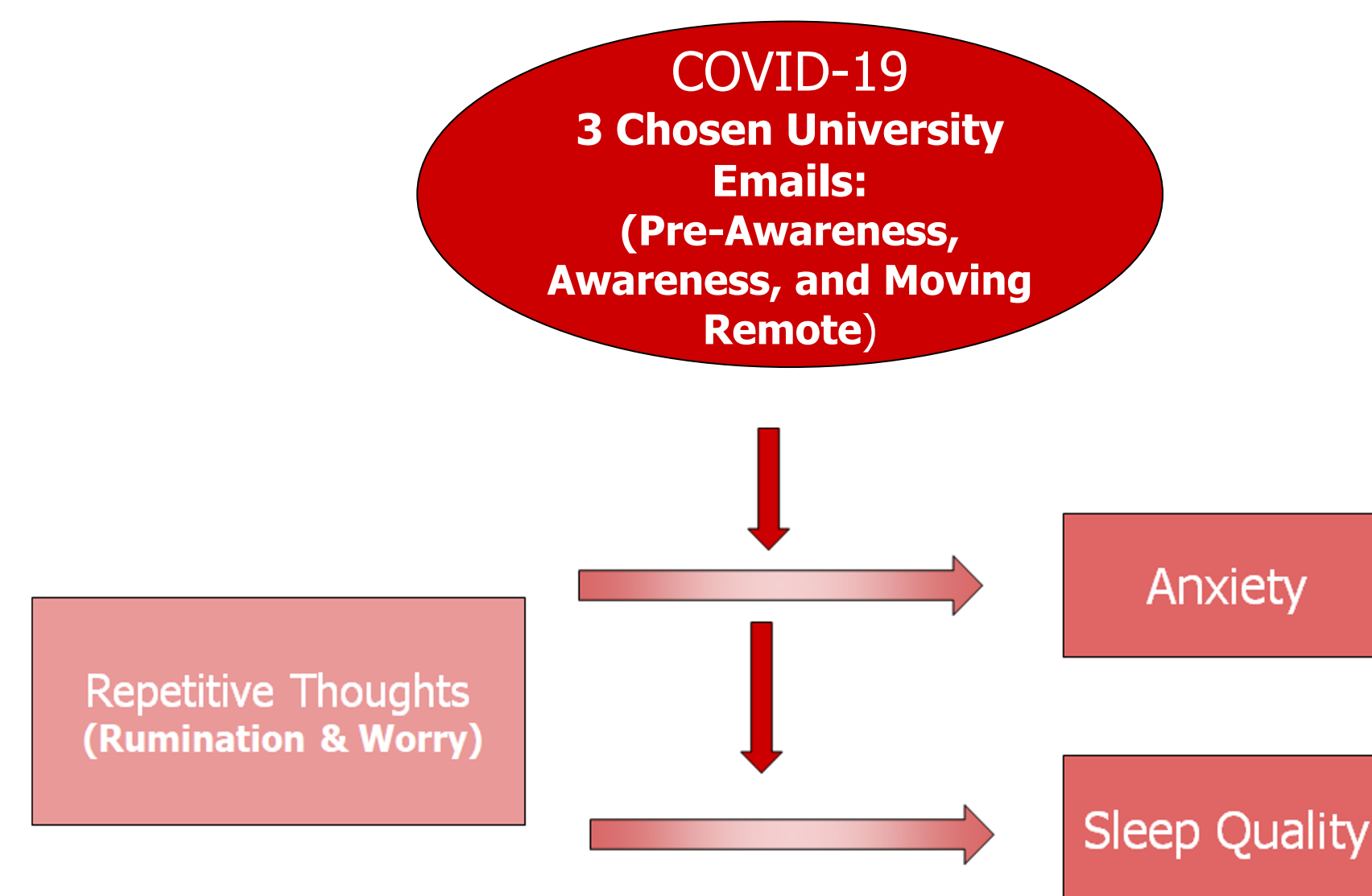


Background

- Worry and rumination are overlapping forms of cognitions.
 - Linked to anxiety and poor sleep quality
 - Increased when stressed
 - COVID-19
- Drawing from an ongoing data collection project
- Examines the dynamic between repetitive thoughts and an individual's self reported anxiety levels and sleep quality during the progression of a pandemic.

Research Question

With the introduction of a novel stressor, COVID-19, how will the interaction and the relationship between worry, rumination, self reported anxiety and sleep quality be impacted?



Methods

Participants:

- Undergraduate students at the UC Merced
- 55 women, 15 men, and 1 non-binary
- 18-28 ($M = 20.56$, $SD = 2.00$) years old
- Each participant was enrolled for two weeks sometime between beginning of February and end of March 2020

Material and Procedure:

- Filled measures (4x Per Day):
 - Worry: 0 (**Not at all**) to 6 (**Extremely**)
 - Rumination: 0 (**Not at all**) to 6 (**Extremely**)
 - Anxiety: 0 (**Not at all**) to 6 (**Extremely**)

Wore a Fitbit Charge 2 that assessed

- Total Minutes Asleep
- Total Minutes in REM Sleep

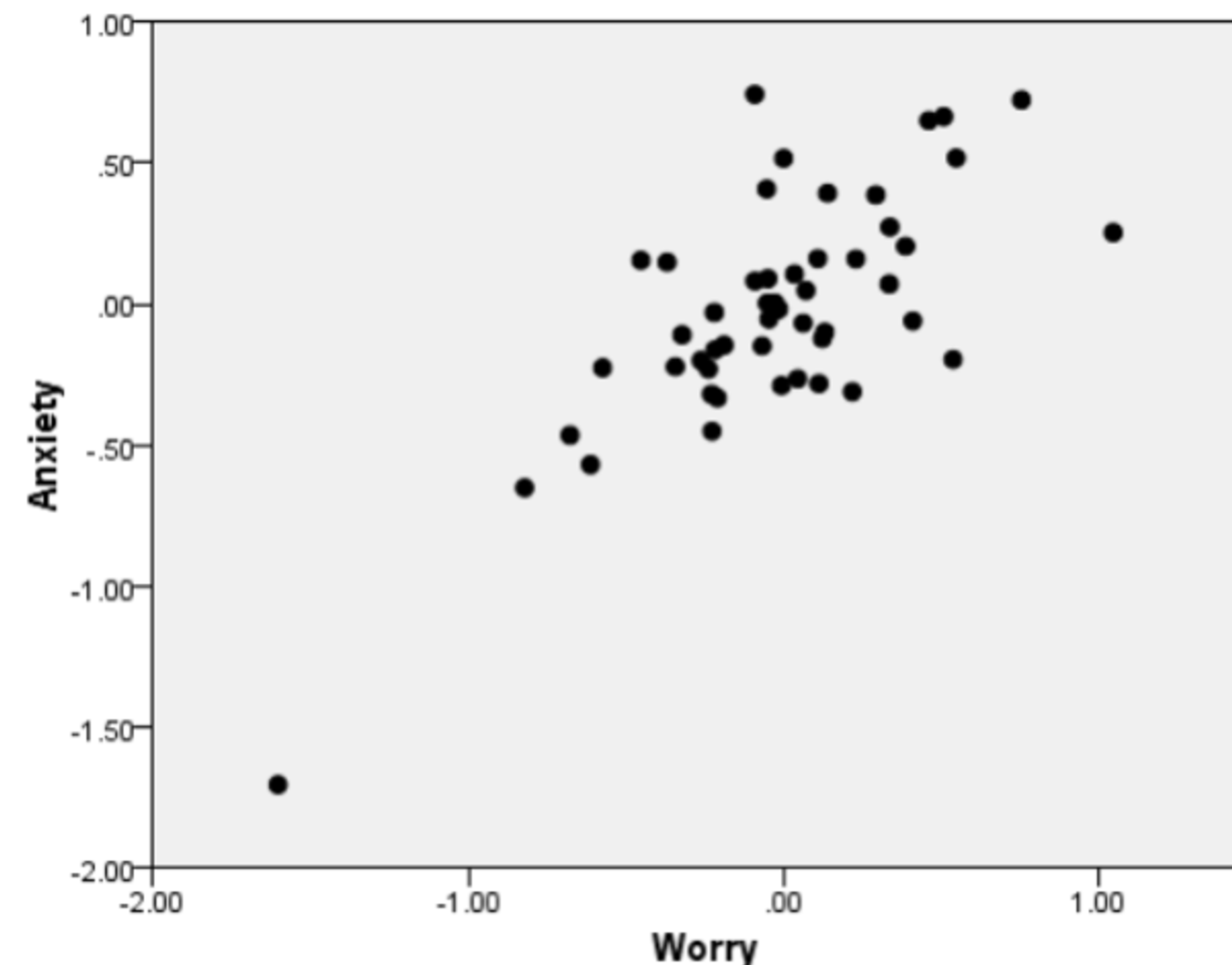
Analysis:

- Using SPSS ANOVAs we analyzed whether:
 - rumination and worry predicted anxiety and sleep
 - being in the study during certain time periods – defined by COVID-19 campus emails – influenced anxiety and sleep
 - the effect of rumination and worry on anxiety and sleep stronger during specific dates

SPSS Testing

	Anxiety		Total Sleep Minutes		Total REM Minutes	
	Aim 1: Main	Aim 2: Interaction	Aim 1: Main	Aim 2: Interaction	Aim 1: Main	Aim 2: Interaction
Rumination	$p = .780$	$p = .445$	$p = .138$	$p = .274$	$p = .450$	$p = .462$
Worry	$p < .001$	$p = .038$	$p = .176$	$p = .624$	$p = .081$	$p = .540$
Email Group	--	$p = .831$	--	$p = .864$	--	$p = .657$
Rumination * Email Group	--	$p = .370$	--	$p = .886$	--	$p = .293$
Worry * Email Group	--	$p = .461$	--	$p = .808$	--	$p = .702$

Fig 1: SPSS testing, where $p < .05$ is significant. Fig 2. Scatter Plot of Worry x Anxiety.



Results

- Study Found the Interaction between Anxiety and Worry to be Statistically Significant, $r = .730$, $p < .001$.
- The Interaction between the being put into a dated group on the relationship between Rumination and Worry, with Sleep and Anxiety were found to be insignificant.

Conclusions

- Findings supported past research
 - Worry and Anxiety affecting each other
- Interaction between
 - Dates chosen and relationship between repetitive thoughts and Anxiety and Sleep
 - Insignificant
- Research Assumed:
 - Individuals had equal information on all days
 - All participants were the same
 - Chosen Emails fully represented COVID-19
- Possible confounding variables:
 - Study implemented bias by ignoring individual differences
 - Participants might already achieve their maximum thresholds
 - Ceiling Effect
 - Other factors in the world
 - Food Shortage
 - World Panic
- Future Directions:
 - Individual differences between participants
 - See their differences along the study
 - Discovering whether rumination is only impacted on the individual level vs grouped level
- By studying how rumination and worry interact
 - Discover different triggers:
 - Midterms
 - Class Schedule
 - Ethnicity
 - Discover Affects to
 - Physical Health
 - Mental Health

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