EVERYDAY LIFE FACTORS THAT AFFECT RECALL MEMORY

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Introduction

Strong long-term memories are dependent on effective encoding and retrieval processes and working memory. Working memory (WM) is a small capacity for short-term storage and utilizing information for difficult tasks such as learning, comprehension, and reasoning (Baddeley, 1992). It is essential for everyday life functioning; it allows us to investigate our current experience, as we move forward and to make sense of the world around us. People with low levels of Working memory capacity (WMC) can store two items in mind. Those with high levels of WMC can store more than four items in mind. The study looked at how many words the participants can recall and whether stress, anxiety, and sleep disturbances affect their memory.

Previous research has been conducted on college students' memory, but it is still unclear how much everyday experiences affect memory (Borkowski & Mann, 1968). . In our previous study, we looked at recreational drug use and how it affects memory, but there was no correlation found between the two. The present study aims to determine how everyday factors in life affect recall memory. Everyday factors include daily stress, sleep disturbances, and anxiety.

Hypothesis:

- Stress will be positively associated with memory performance
- Anxiety will be negatively associated with memory performance
- Sleep Disturbances will be negatively associated with memory performance

Method

Participants

College students enrolled at Eastern Kentucky University participated in the study. All participants gave informed consent and received course credit for their participation.

Materials

- Perceived Stress Scale Survey: A 10-item questionnaire was used from Cohen & Williamson (1988) to measure the participant's stress depending on their thoughts and feelings during the past month.
- Positive and Negative Affect Schedule: A 9-item questionnaire was used from Buysse et al. (1989) to measure the participant's sleep disturbances in the past month.
- Pittsburgh Sleep Quality Index survey: A 20-item questionnaire was used from Watson et al. (1988) to measure the participant's anxiety by asking the participants about how they felt over the past week
- Memory Task: A memory task based on Lawson et al. (2000) was used to measure the participant's recall memory. They were given 30 words and 3 minutes to study. Afterwards, they were given basic math problems to solve in 2 minutes. After the 2 minutes, participants were given 5 minutes to recall as many words as they can from the word list.

Procedure

After agreeing to participate, participants were asked to perform a memory task. With the memory task, they were asked to memorize a list of 30 words for 3 minutes. After 3 minutes, they worked on basic math problems for 2 minutes. Then they were given 3 minutes to recall as many words as possible in any order. Afterwards they were asked to fill out the three surveys on stress, anxiety, and sleep quality.

Memory Task

With the memory task, participants were given a list with 30 words and 3 minutes to study for memorization.

Globe	Horse	Pause	Doubt	Thigh	Labor
Fight	Fault	Moral	Round	Offer	Juice
Screw	Occur	Blink	Allow	Waste	Class
Ready	Dairy	Lower	Brick	Basis	Habit
Adapt	Clear	Medal	Hotel	Pupil	Party

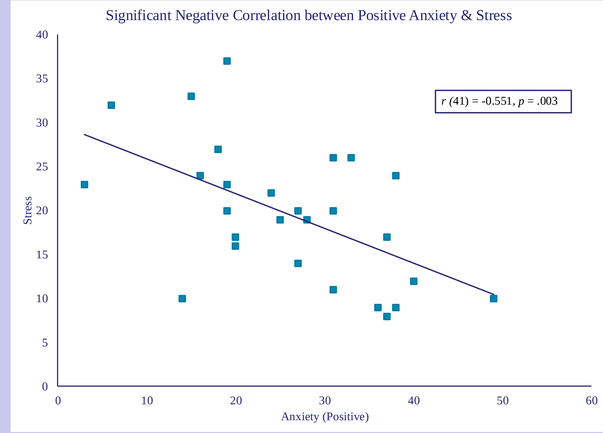
Correlation Matrix

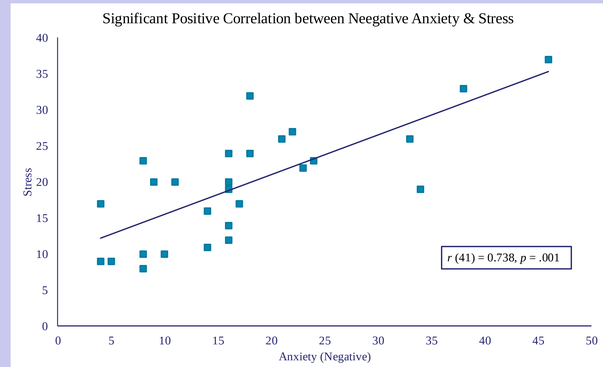
		Stress	Anxiety (Positive)	Anxiety (Negative)	Sleep Disturbances	Age	Memory Recall
Stress	Pearson's r						
	p-value						
Anxiety (Positive)	Pearson's r	-0.551					
	p-value	0.003					
Anxiety (Negative)	Pearson's r	0.738	-0.213				
	p-value	< .001	0.286				
Sleep Disturbances	Pearson's r	0.220	0.067	0.321			
	p-value	0.271	0.742	0.102			
Age	Pearson's r	-0.347	0.461	-0.302	0.499		
	p-value	0.089	0.020	0.143	0.011		
Memory Recall	Pearson's r	0.097	0.004	0.064	0.318	0.126	
	p-value	0.651	0.984	0.766	0.130	0.577	
False Recall	Pearson's r	0.268	0.128	0.072	-0.038	0.099	-0.330
	p-value	0.195	0.542	0.732	0.858	0.653	0.115

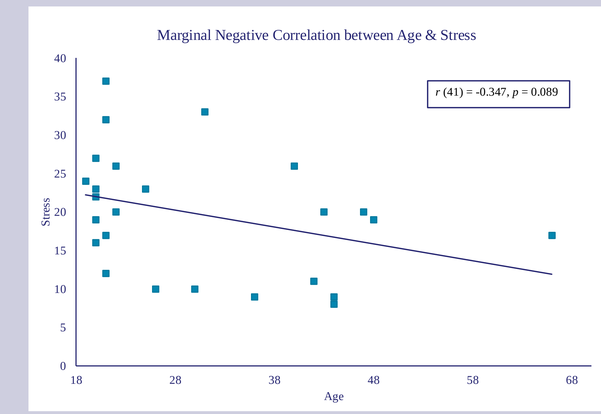
Discussion

This study examined how stress, anxiety (positive & negative), and sleep disturbances affect memory recall. Results showed that participants who scored a positive score on the PANAS experienced lower stress levels. Participants with anxiety (negative) did have a higher chance of stress. Furthermore, older participants reported having lower chances of stress. No hypotheses were supported.

Possible limitations are lack of motivation to study and limited communication in case they had questions during the study. Also, there were not enough participants for the study. Nonetheless, it still unclear how much everyday experiences affect memory. In the future, data should be collected in person to get better results and a larger sample size is needed to better understand how much everyday experiences affect working memory.







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